Report on

Baseline Wave-1996

HIV Risk Behavior Sentinel Surveillance Survey in Tamil Nadu

AIDS Prevention and Control Project
Voluntary Health Services
Adyar, Chennai 600 113. INDIA

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FOREWORD

HIV/AIDS scenario in the state of Tamil Nadu, India has prompted the programers, to launch intensive preventive intervention program in the state. Behavior change is the only possible way by which we can control the spread of this dreaded infection, more so in the absence of a potent vaccine and effective treatment. Since the preventive methods of intervention adopted by AIDS Prevention and Control Project (APAC) aim at behavior change it becomes imperative to study the behavior of different population groups which are at risk of acquiring the HIV/AIDS infection. Also a study on the behavior of these population groups at sentinel sites in regular intervals, to monitor their behavior change if any will provide data for interventional modifications.

The AIDS Prevention and Control Project (APAC) of VHS funded by USAID, which is one of the program implementing organizations for control of HIV/AIDS in Tamil Nadu has commissioned the Behavior Sentinel Surveillance Survey in this State. The study was executed by AIMS Research Organization, Chennai. This study is going to be a repeated exercise in selected population groups and includes several waves of data collection. I am proud to say that the baseline wave has been successfully completed and the findings presented in this monograph were disseminated to various interested individuals and institutions. This baseline wave apart from providing measures on indicators for behavior change, will also have implications for intervention designs, planning and evaluation of prevention programs in Tamil Nadu.

I wish to record my appreciation for the expert advice provided by Mr. Stephen Mills, Program Officer, AIDSCAP for the successful conduct of the BSS study and to AIMS Research Organization for conducting the study well as per the design. We wish that this report will be a valuable document for the people working in the field of HIV/AIDS prevention in Tamil Nadu and elsewhere in the world.

Dr. N.S. Murali
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EXECUTIVE SUMMARY

TAMIL NADU HIV RISK BEHAVIOR SURVEILLANCE SURVEY

Introduction

This report summarizes the methodology and findings of the Tamil Nadu HIV Risk Behavior Surveillance Survey (BSS) conducted during October-December 1996. This study was commissioned by AIDS Prevention and Control Project (APAC) administered by Voluntary Health Services (VHS), Chennai funded by the United States Agency for International Development (USAID) and was executed by Asian Information Marketing & Social Research (AIMS). The need for the study was felt since behavior change is viewed as the only way to prevent spread of HIV and intervention can be measured only by resultant behavior change. Moreover, such studies, especially in Tamil Nadu are sparse. This is the first exercise of its kind in the State.

BSS indicators

The main objective of the BSS is to provide repeated measures on behavior indicators for observing trends in high-risk behavior among selected sub-population groups and to measure success of intervention programs. A set of nine behavior indicators were measured during the baseline wave:

Knowledge related indicators:

- Proportion of respondents who cite two acceptable ways of preventing Sexually Transmitted Diseases (STD).
- Proportion of respondents who know that condoms prevent STD.
- Proportion of respondents who cite two acceptable ways of preventing HIV transmission.
- Proportion of respondents who know that condoms prevent HIV transmission.

Sexual behavior related indicators:

- Proportion of respondents who report heterosexual intercourse with a non-regular partner in last twelve months.
- Proportion of respondents who report condom use during their last sexual intercourse with a non-regular partner in the last twelve months.

Urethritis symptoms and treatment related indicators:

- Proportion of male respondents who report symptoms of urethritis during the last twelve months.
- Proportion of male respondents who have sought treatment from qualified medical practitioners for urethritis in the last twelve months.

Appropriate risk perception related indicator:

- Proportion of respondents with risk behavior who perceive appropriately that they are at risk of contracting HIV / AIDS.

Other information collected include misconceptions about transmission and prevention of STD and AIDS, awareness sources, type of sexual partners, condom use and extent of sex with CSWs, other symptoms of STD, type of treatment and reasons for risk perception.

Sampling

The sample population groups identified for the study-included population sub-groups at various risk levels ranging from known high risk behavior groups to groups with unknown risk behavior. These were female commercial sex workers (CSW), male patients with STD (MSTD), truck drivers and helpers (TH), male factory workers (MFW), female factory workers (FFW), unmarried male students (MS) and female students (FS).

The study was conducted in 10 sample towns selected out of 48 towns of Tamil Nadu identified by APAC. These 48 towns were selected because they were market towns, industrial centers, places of pilgrimage or tourism, ports, harbors, trucking points and thus had a higher than normal density of floating population. They also offered higher than average opportunity for high-risk sexual behavior.

The sample size for each population group was calculated based on estimates of sexual behavior patterns and condom use among each of the population groups. Estimates were based on available data, past experience, ethnographic studies and expert opinions. Town-wise sampling frames were developed and sampling universe estimated using secondary and primary data sources for each population group. PPS sampling was used to select the required sample size from the sampling frame for each town identified for selected population group.

Exploratory research

The survey itself was quantitative using structured questionnaires in order to obtain measures of the behavior pertaining to the indicators. To prepare for the survey, standardized interview tools for behavior measurement were developed based on extensive exploratory qualitative research among each selected

population group. This major exercise enabled design of questionnaires, identification of logistical bottlenecks and tested the feasibility of collecting reliable data on BSS indicators.

Separate questionnaires were developed for each population group. The questionnaires had some components in common whereas others were specific to the individual population group. Self-administered questionnaires were used for male and female students. For the other population groups one-to-one interviews were conducted based on individual questionnaires. An intensive training of investigators was conducted to ensure standardization of data collection procedures. Steps were taken to ensure quality control and strict adherence to ethical standards. A good rapport building exercise preceded each of the interviews.

Data collection was supervised and data scrutinized from three field headquarters. It was completed in all 10 towns within a period of six weeks. 92 trained interviewers and 23 experienced field executives with a research team of six professionals were involved in the fieldwork.

Results

General information

The commercial sex workers had a mean age of 31.2 years and over 60% of them were married. 38% were illiterate and 60% of them had no source of income other than commercial sex.

The mean age of male STD clinic attendees was 29.2 years and 8% of them had completed schooling. About half of them were unmarried. The occupation spread of the male STD clinic attendees revealed that around 10% of each belonged to industries/groups like trucking, automobile/taxi driving, construction, dairy/agriculture, vegetable seller/petty traders, coolies/physical laborers. The remaining 40% were scattered across various other occupations. 43% of them were taking treatment at government facilities including STD clinics and 36% from qualified allopathic private practitioners in hospitals, clinics and private practice set ups and the remaining 21% sought treatment from unqualified and non-allopathic practitioners.

The mean age of the truckers is 27.7 years and half of them were unmarried; 42% had studied up to class VI and 30% had completed their school final level. Over 60% of those interviewed were truck drivers and the remaining 40% were helpers.

Male and female factory workers covered in the study were between the ages of 18 and 35 years. Nearly half of both sexes were unmarried. Among females 11% were illiterate as compared to 1% in males who were illiterate. 42% of males and 30% of females had completed school final level. 30% of the males had middle school level education compared to 38% of the females. 73% of male factory workers and 62% of female factory workers were skilled workers.

The interviews among students were restricted to unmarried males and females and executed through a self-administered questionnaire. 44% of the male and female students were interviewed at schools (Classes XI & XII), 52% in colleges and the remaining in recognized diploma courses. Less than 5% of the students had part time employment.

Indicators

The knowledge indicators on at least two acceptable prevention methods of STD (indicator 1) and HIV/AIDS (indicator 3) showed high awareness levels of the order of 90% among all study population groups. Except female factory workers and female students.

Sex with non-regular sexual partners in the last 12 months was observed to be at high levels among male STD clinic attendees (82%) followed by truckers and helpers (48%) and male factory workers (15%). Below 3% of male students and female factory workers reported sex with non-regular partners and among female students it was below 1%.

Condom use during last sexual intercourse with non-regular sexual partner was reported among a majority of the CSWs (56%), followed by truckers and helpers (44%), male students (41%), female students (38%), female factory workers (20%), male factory workers (17%), and male STD clinic attendees (12%).

Among male respondents, paid sex was reported by 68% of STD patients, 38% of truckers, 7% of male factory workers and 1% of students. However a higher proportion of male students (80%) and truckers (55%) reported condom use during paid sex.

Incidence of urethritis in the last year among the male respondents was reportedly high among STD clinic attendees (65%) followed by truckers and helpers (9%), male students (3%), and male factory workers (2%). Correspondingly, the indicator pertaining to treatment sought from qualified allopathic practitioners had varying health-seeking behavior levels (truckers and helpers 64%, male factory workers 58%, and male students 18% of those who reported urethritis symptoms).

The indicator on perception of risk for HIV by those who did not use condoms during the last non-regular sexual intercourse showed that majority of the CSWs (56%) perceived risk. Perception of other groups was lower – truckers and helpers (44%), male students (41%), female students (38%), female factory workers (20%), male factory workers (17%) and male STD clinic attendees (12%).

Discussion

While the knowledge levels on prevention methods (STD/HIV/AIDS) and condom use were very high among most respondents, the level of misconceptions was also high. Indeed a dismally low percentage of the study groups actually knew two acceptable prevention methods without having any

misconceptions. The misconceptions related mainly to casual modes of transmission of STD and HIV/AIDS such as transmission through sharing clothes with infected persons, use of public toilets etc.

Electronic media, print media followed by peers were largely responsible for existing high awareness of HIV/AIDS among all population groups. Television was the source of awareness for 54% of truckers and helpers at the lowest level and 89% among female students.

HIV/AIDS prevention program should emphasize on the multimedia approach including the peer education model with stress on combating misconceptions to bring about a behavioral change in the study population groups.

BACKGROUND

BACKGROUND

This report contains findings from the baseline wave of the Tamil Nadu HIV Risk Behavior Surveillance Survey (BSS) conducted during October-December 1996. This baseline wave is the first of several survey waves planned at yearly intervals, which over time will provide information on changes in risk behavior through a set of carefully identified indicators.

HIV/AIDS prevention activities in Tamil Nadu are carried out since 1987 through government and private organizations. A major effort in this direction has been launched through the APAC Project, administered by the Voluntary Health Services (VHS), Chennai and funded by the United States Agency for International Development (USAID). The APAC Project focuses at reducing the sexual mode of transmission of HIV / AIDS, as it is the major mode of transmission in the country, accounting for over 80% of the HIV infections. The APAC Project targets specific population groups and geographical areas and includes intervention strategies for Behavior Change Communication, Prevention and Control of Sexually Transmitted Diseases and Condom Promotion.

The BSS was commissioned by the APAC Project and executed by AIMS Research, a professional research agency. The methodology designed for the BSS in Tamil Nadu was based on the experience of a similar study conducted in Bangkok, Thailand by Family Health International's AIDS Control and Prevention Project (AIDSCAP), which was also funded by USAID.

Some of the reasons for conducting the BSS are listed below.

Why BSS?

- *Behavior change is now, and will perhaps for the future, be the only way to prevent spreading of HIV.*
- *Prior to this study, large scale surveys on AIDS-related issues especially on behavior are sparse in Tamil Nadu, where such a major exercise has been done for the first time. The few earlier studies in the state were basically on knowledge and attitude. Comprehensive information on actual risk behavior or condom use representative of any sub-population groups of the state was practically not available.*
- *Identification of population sub-groups and designing of interventions at the state level cannot be done systematically in the absence of such surveys and have to be based on available information and several assumptions.*
- *The APAC Project has begun with the work of gradually and systematically initiating interventions in Tamil Nadu through its sub-grantees. Over time APAC Project's interventions will cover priority areas in the state identified by the APAC. (See page 2).*
- *Any intervention effort has to be monitored and evaluated and the performance has to be measured. The BSS indicators will provide some measures of trend in behavior change in the priority areas of the state.*
- *Beside providing long term indicators, the BSS will also set the agenda for future research.*
- *Experiences in other countries have revealed the feasibility of conducting behavior studies on issues related to sexual behavior which were hitherto considered a taboo and impossible especially through quantitative survey techniques.*

PRIORITY AREAS IN TAMIL NADU FOR APAC

Sl. No.	Towns	Sl. No.	Towns	Sl. No.	Towns
1	Arcot	17	Kanyakumari	33	Ranipet
2	Arupukottai	18	Karur	34	Salem
3	Bhavani	19	Kodaikanal	35	Sivakasi
4	Chennai	20	Kovilpatti	36	Srirangam
5	Chidambaram	21	Kumbakonam	37	Thanjavur
6	Coimbatore	22	Madurai	38	Theni
7	Coonoor	23	Mahabalipuram	39	Thiruchendur
8	Courtalam	24	Nagapattinam	40	Thirunelveli
9	Couvakkam	25	Nagercoil	41	Tiruchengode
10	Cuddalore	26	Namakkal	42	Tiruppur
11	Dindigul	27	Ooty	43	Tiruchirapalli
12	Erode	28	Palani	44	Tuticorin
13	Gudiyattam	29	Pollachi	45	Vellore
14	Hogenekal	30	Rajapalayam	46	Villupuram
15	Hosur	31	Ramanathapuram	47	Virudhunagar
16	Kancheepuram	32	Rameswaram	48	Wellington

Objective and scope of the BSS

The BSS is essentially a long term exercise involving several waves of data collection among the same population sub-groups, with the same tools and at the same sample towns. This will provide comparable data on reported behavior of the target groups and will eliminate most biases in the survey design, methodology and under / non-reporting, if any.

The baseline wave therefore becomes very important as it sets the methodology of data collection, helps in identifying sample towns, and standardizing the tools of data collection.

To facilitate identical future waves, a rigorous methodology involving several stages was designed and implemented reducing the scope for deviations in the future.

The data provided by the baseline wave would serve as a good measure on behavior among selected population sub-groups in priority intervention areas of the APAC Project. Therefore the scope of BSS study does not cover the general population of the state.

THE OBJECTIVE OF THE BSS IS:

To provide repeated measures on behavior indicators for observing trends in high-risk behavior among selected sub-population groups targeted by APAC Project for HIV prevention intervention in Tamil Nadu

BSS indicators

Based on the universe of behavioral indicators for HIV / AIDS recommended by WHO and USAID, a set of four knowledge indicators, two behavior and three other HIV / AIDS related indicators were adopted by the APAC which were used in the BSS.

Indicators measured during the baseline wave.	
I KNOWLEDGE INDICATORS	**1. Proportion of respondents who cite two acceptable ways of preventing Sexually Transmitted Diseases.** **2. Proportion of respondents who know that condoms prevent STD.** **3. Proportion of respondents who cite two acceptable ways of preventing HIV transmission.** **4. Proportion of respondents who know that condoms prevent HIV transmission.**
II BEHAVIORAL INDICATORS	**5. Proportion of respondents who report heterosexual intercourse with a non-regular partner in the last year.** **6. Proportion of respondents who report condom use during their last sexual intercourse with a non-regular partner in the last year.**
III URETHRITIS PREVALENCE AND HEALTH SEEKING INDICATORS	**7. Proportion of male respondents who report symptoms of urethritis during the last year.** **8. Proportion of male respondents who sought treatment from qualified medical practitioners for urethritis in the last year.**
IV APPROPRIATE PERCEPTION OF RISK	**9. Proportion of respondents with risk behavior who perceive appropriately that they are at risk of contracting HIV/AIDS.**

Besides measures on the above indicators, several other related information and measures were required in order to explain the indicator values. Important areas on which further information was gathered included:

Knowledge related:

1. Misconceptions about prevention/transmission,
2. Sources of awareness.

Sexual behavior related:

1. Type of non-regular sex partners
2. Population sub-groups involved in paid-sex
3. Condoms used during such paid-sex

STD related:

1. STD symptoms other than Urethritis
2. Type of practitioners from whom treatment was sought

Risk perception related:

1. Lack of risk perception by population sub-groups with unsafe sex behavior
2. Reasons for risk perception

METHODOLOGY

METHODOLOGY

The BSS involved a rigorous methodology which was designed scientifically and is expected to yield practically useful time series data for the HIV intervention program managers and implementers.

The survey itself was quantitative using structured questionnaires in order to obtain measures on the indicators. However, available standardized interview tools for behavior measurement (such as that suggested by the global program on AIDS) could not be applied directly due to cultural, attitudinal and behavioral difference among the groups studied. Considerable work had to be done to redesign standard tools to enable better accuracy. The baseline wave of the BSS therefore was preceded by extensive exploratory qualitative research to prepare for the survey in terms of questionnaire design, logistics etc..

Being a quantitative survey, the preparatory work involving selection of population sub-groups, towns and sample size had been done by the APAC. Within the selected sample towns, the universe of the sub-population sub-groups was estimated and accurate sampling frames were prepared for cluster sampling of respondents.

The BSS baseline wave therefore involved several stages and each stage of implementation was closely monitored and lessons learnt for future waves of BSS.

Population sub-groups

The APAC, in consultation with experts, had identified seven population sub-groups for repeated HIV/AIDS related behavioral measurements. The purpose of selecting certain groups at various risk levels is to provide repeated measures of behavior among the same cross section of the population so that the data become comparable over repeated waves of survey. Seven such target groups were selected and were defined as follows

Population sub-group definitions

Female commercial sex workers (CSWs)

Women engaging in sex for full time or part-time as a means of earning during the past three months.

Male patients with sexually transmitted disease (MSTD)

Male patients attending government and private STD treatment facilities.

Population sub-group definitions (contd.)

Truck drivers and helpers (TH)

Men driving trucks or assisting drivers along transport routes.

Male factory workers (MFW)

Men aged 18 to 35 years, working for the past three months in factories, which employ 10 or more persons in a work place. The unit should have been functioning for more than 12 months.

Female factory workers (FFW)

Women aged 18 to 35 years, working for the past three months in factories, which employ 10 or more persons in a work place. The unit should have been functioning for more than 12 months.

Male students (MS)

Unmarried males, studying in recognized educational institutions, such as, schools (Class XI & XII), diplomas, under graduation and post graduation levels.

Female students (FS)

Unmarried females, studying in recognized educational institutions, such as, schools (Class XI & XII), diplomas, under graduation and post graduation levels.

Population sub-groups and sampled towns

An expert group of the APAC based on certain parameters had identified 48 cities/towns in Tamil Nadu as priority areas for the APAC Project.

From these 48 towns a set of sample towns was selected through the following steps

- Assigning scores for each town based on expected density of each population sub-group thereby generating seven lists of towns.
- Arranging towns in descending order of density of the population sub-groups.
- Selection of a common list of towns with maximum sub-population density for three or more population sub-groups for the study.

A total of nine towns were sampled initially (Table 1.1). An additional town was selected as a replacement for interviewing CSWs, because in Chidambaram, CSWs could not be interviewed due to law and order problems.

TABLE 1.1: POPULATION SUB-GROUPS SPREAD ACROSS SAMPLE TOWNS

Towns	CSW	MSTD	TH	MFW	FFW	MS	FS
Chennai	✓	✓	✓	✓	✓	✓	✓
Coimbatore	×	×	×	✓	✓	✓	✓
Madurai	✓	✓	✓	✓	✓	✓	✓
Salem	✓	✓	✓	×	×	✓	✓
Vellore	×	✓	✓	×	×	✓	✓
Erode	×	✓	×	✓	✓	×	×
Nagercoil	×	✓	×	×	×	×	×
Dindigul	×	✓	✓	✓	✓	×	×
Palani	✓	×	×	×	×	×	×
Chidambaram	×	×	×	×	×	✓	✓

Sample sizes for respective population sub-groups

Table 1.2 shows the estimation based on which the sample size were derived for each population sub-group. Expected values of the key study indicators viz. respondents who had sex with non-regular partners and among them those who used condoms during the last such sexual intercourse, were estimated from available experiences, ethnographic studies and assumptions of experts working in the area of HIV/AIDS.

These estimates were made in order to calculate sample size so that a 10% change in behavior could be detected in future waves. Cluster sampling was followed.

TABLE 1.2: ASSUMPTIONS FOR SAMPLE SIZE CALCULATION

Population Sub-Groups	Est. %-Non Regular Sex Partner	Last Sex Condom Use (%)	Behavior Change to Detect (%)	No. of Sites	No. of Interview Sites	Sample Size
Female CSWs	100	10	10	20	20	400
Male STD patients	60	10	10	30	20	600
Truck drivers and helpers	60	25	10	30	20	600
Male factory workers	25	10	10	65	20	1300
Female factory workers	20	10	10	32	50	1600
Male students	20	25	10	34	50	1700
Female students	10	50	10	60	100	6000

Note : Sample size were computed based on the formula for estimation of difference in two proportions.

Sampling frames and universe

An exercise was carried out (with the assistance of government departments, NGOs and others workin in the area of HIV/AIDS with specific population sub-groups) to estimate the town-wise populatio sub-group within the sample towns, in all population sub-groups. Then, all sample sites for eac population sub-group, in each town were identified and estimate on numbers of population sub-group site-wise was arrived at.

The sampling in each town for individual population sub-groups was calculated on a probabilit proportion to size (PPS) method.

Commercial sex workers

The Delphi technique was adopted in almost all the sample towns for this category. This metho involving consensus estimates by experts in each locality was employed among rickshaw drivers auto-rickshaw drivers, pimps, hotel and lodge owners, policemen and NGOs. The sampling was done o the basis of probable sites where a specific number of CWSs could be found during any point of time Initially four towns were sampled and on addition of a fifth town, the exercise was repeated there.

Male STD patients

Data on number of patients attending government STD clinics in all the target towns provided by th Tamil Nadu State AIDS Control Society showed that the average attendance of patients was no sufficiently large enough to complete the desired sample size. Thus the scope of conducting the study i male STD patients was extended to include private qualified and unqualified practitioners treating STD and included facilities in all seven towns.

Truck drivers and helpers

To arrive at the number of truck drivers and helpers, estimates were prepared based on informatio obtained through government departments, transport owners, fleet contractors, agents and representative of truckers federations and unions on number of trucks passing and halting at all major national highway (entry and exit points in each city). The sampling frames with the identified halting points and numbe of trucks halting as well as passing through were prepared for each of the five towns.

Students and factory workers

For students and organized factory workers, the total target population was estimated through secondar data sources available in various Local/Municipal/Corporation/State Government departments. The 199 census data also helped in estimation of the sampling universe of these groups. Detailed lists of a

recognized educational institutions were prepared and sampling frames for students in the six sample towns and sampling frames for factory workers prepared from list of factories obtained from Inspectors of Factories in the five sample towns.

Sample size for sample towns

The estimated sample sizes for each population sub-group were spread across the sample towns selected for that target group using the probability proportion to size method, with a minimum of three sample clusters in very small towns to get an adequate representation of the town. Table 1.3 summarizes the sample size across various sample towns for the population sub-groups.

A systematic random sampling was applied to the sampling frames to select the interview sites. Once a site was selected necessary permission was obtained from the "gatekeepers". When permission was refused, alternate sites were sampled. Within a site, a cluster of the required size was calculated utilizing random starts and ensuring unbiased sampling and checking if the respondents were filtered by the gatekeepers in case of factory workers and students. When the required cluster size could not be achieved in a site, the site was redefined to include adjacent sites.

In the case of students it was found necessary to follow a stratified random sampling thereby ensuring coverage of all types of institutions and students in all courses in proportion to their occurrence in the universe.

TABLE 1.3: POPULATION SUB-GROUPS SPREAD ACROSS SAMPLE TOWNS

Towns	CSW	STD	TH	MFW	FFW	MS	FS
Chennai	180	253	321	646	812	746	3250
Coimbatore	x	x	x	369	369	327	966
Madurai	100	100	127	237	377	262	968
Salem	60	60	110	x	x	156	388
Vellore	x	62	61	x	x	156	305
Erode	x	62	x	63	152	x	x
Nagercoil	x	40	x	x	x	x	x
Dindigul	x	62	70	71	163	x	x
Palani	60	x	x	x	x	x	x
Chidambaram	x	x	x	x	x	163	319
TOTAL	400	639	689	1386	1873	1813	6196

x Town not included for this category

Sampling frames and universe

An exercise was carried out (with the assistance of government departments, NGOs and others working in the area of HIV/AIDS with specific population sub-groups) to estimate the town-wise population sub-group within the sample towns, in all population sub-groups. Then, all sample sites for each population sub-group, in each town were identified and estimate on numbers of population sub-groups site-wise was arrived at.

The sampling in each town for individual population sub-groups was calculated on a probability proportion to size (PPS) method.

Commercial sex workers

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Male STD patients

Data on number of patients attending government STD clinics in all the target towns provided by the Tamil Nadu State AIDS Control Society showed that the average attendance of patients was not sufficiently large enough to complete the desired sample size. Thus the scope of conducting the study in male STD patients was extended to include private qualified and unqualified practitioners treating STDs and included facilities in all seven towns.

Truck drivers and helpers

To arrive at the number of truck drivers and helpers, estimates were prepared based on information obtained through government departments, transport owners, fleet contractors, agents and representatives of truckers federations and unions on number of trucks passing and halting at all major national highways (entry and exit points in each city). The sampling frames with the identified halting points and number of trucks halting as well as passing through were prepared for each of the five towns.

Students and factory workers

For students and organized factory workers, the total target population was estimated through secondary data sources available in various Local/Municipal/Corporation/State Government departments. The 1991 census data also helped in estimation of the sampling universe of these groups. Detailed lists of all

recognized educational institutions were prepared and sampling frames for students in the six sample towns and sampling frames for factory workers prepared from list of factories obtained from Inspectors of Factories in the five sample towns.

Sample size for sample towns

The estimated sample sizes for each population sub-group were spread across the sample towns selected for that target group using the probability proportion to size method, with a minimum of three sample clusters in very small towns to get an adequate representation of the town. Table 1.3 summarizes the sample size across various sample towns for the population sub-groups.

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Coimbatore	x	x	x	369	369	327	966
Madurai	100	100	127	237	377	262	968
Salem	60	60	110	x	x	156	388
Vellore	x	62	61	x	x	156	305
Erode	x	62	x	63	152	x	x
Nagercoil	x	40	x	x	x	x	x
Dindigul	x	62	70	71	163	x	x
Palani	60	x	x	x	x	x	x
Chidambaram	x	x	x	x	x	163	319
TOTAL	400	639	689	1386	1873	1813	6196

x Town not included for this category

Exploratory research

The first stage in the BSS was the conduct of qualitative exploratory research. The objectives of the qualitative exploratory research phase of the study were:

- *To design questionnaires for each target group in order to elicit frank and accurate responses, especially for the sensitive sexual behavior related questions.*
- *To identify logistical bottlenecks in carrying out the BSS and develop solutions*
- *To test and identify feasible BSS indicators.*
- *To assess the training needs of the BSS investigators and design a training package.*

The methodology used was qualitative in-depth interviews and in a few cases, focus group discussions and paired interviews were adopted. The respondents for this phase were the target groups themselves besides the influencing groups or 'gatekeepers' whose attitudes were identified as a key determinant of the survey's success. These discussions were based on systematically developed discussion guides developed in a Discussion Guide Workshop in which experts from AIMS Research and APAC Project participated. The workshop prepared a set of interview guides and formats for content analysis. A model Discussion Guide Flow Chart is shown in Figure 1.1.

A training of the qualitative research team, which carried out the exploratory research was conducted. The issues that were examined by qualitative research, specific to the BSS study were the questionnaire components including knowledge and awareness of sex, HIV/ AIDS, STD and condom usage. Other questionnaire components included current sexual practices, behavior and risk perceptions. Effective methods of questioning like self-administered tools as opposed to interviews and the feasibility of direct or masked or implied questions were also examined.

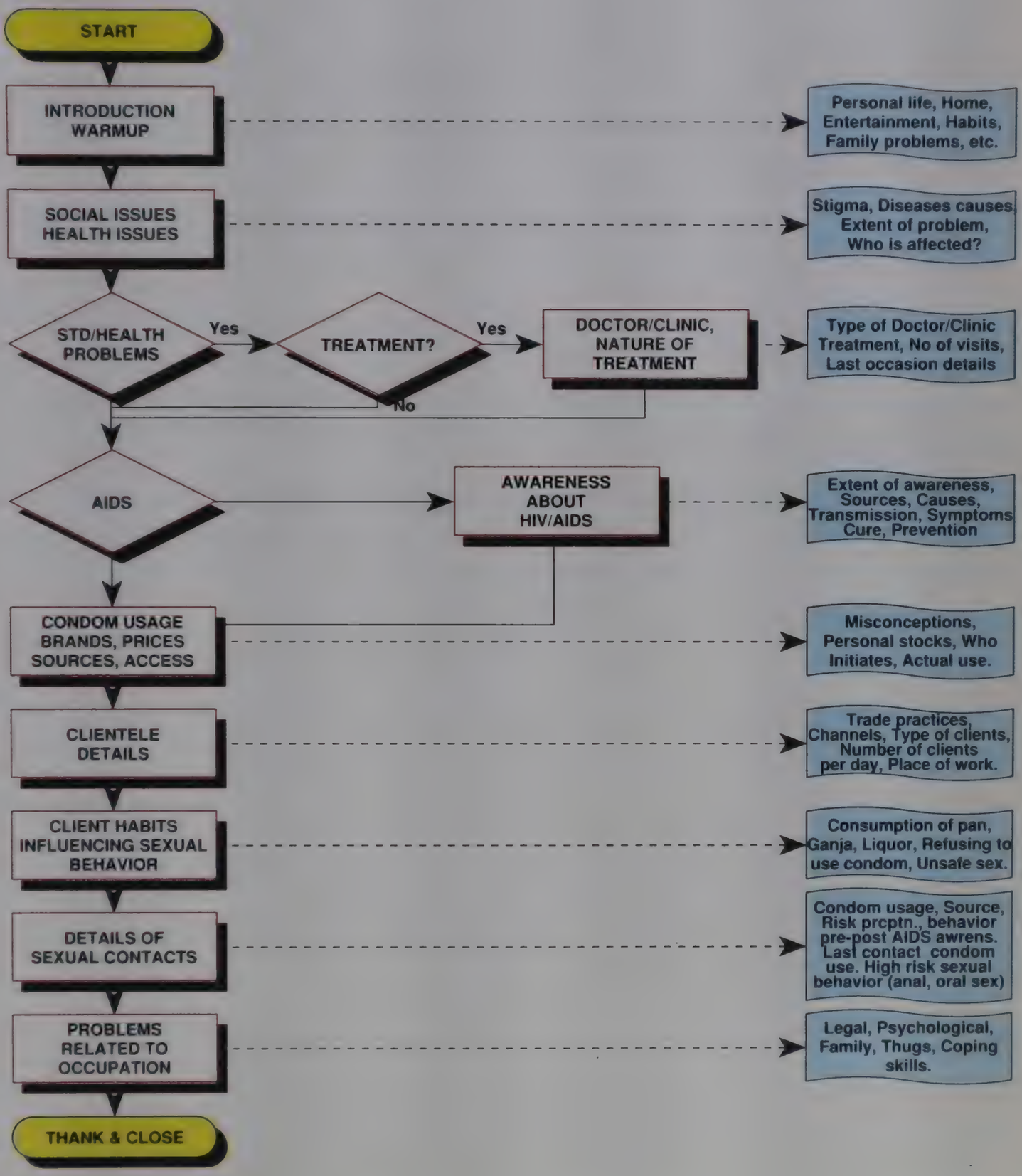
Along with the above, the identification of logistical bottlenecks, ways to overcome the same and the resistance from the influencing segments were also examined

Exploratory research identified a number of issues related to logistics planning, field training, questionnaire design as well as the feasibility of measurement on each proposed indicator. Feasible solutions for each problem were derived for inclusion in the methodology.

FIGURE : 1.1

Model Discussion Guide Flowchart

(Used for female commercial sex workers)


START
INTRODUCTION WARMUP
Personal life, Home, Entertainment, Habits, Family problems, etc.
SOCIAL ISSUES HEALTH ISSUES
Stigma, Diseases causes Extent of problem, Who is affected?
STD/HEALTH PROBLEMS
Yes
TREATMENT?
Yes
DOCTOR/CLINIC, NATURE OF TREATMENT
Type of Doctor/Clinic Treatment, No of visits, Last occasion details
No
AIDS
AWARENESS ABOUT HIV/AIDS
Extent of awareness, Sources, Causes, Transmission, Symptoms Cure, Prevention
CONDOM USAGE BRANDS, PRICES SOURCES, ACCESS
Misconceptions, Personal stocks, Who Initiates, Actual use.
CLIENTELE DETAILS
Trade practices, Channels, Type of clients, Number of clients per day, Place of work.
CLIENT HABITS INFLUENCING SEXUAL BEHAVIOR
Consumption of pan, Ganja, Liquor, Refusing to use condom, Unsafe sex.
DETAILS OF SEXUAL CONTACTS
Condom usage, Source, Risk prcptn., behavior pre-post AIDS awrens. Last contact condom use. High risk sexual behavior (anal, oral sex)
PROBLEMS RELATED TO OCCUPATION
Legal, Psychological, Family, Thugs, Coping skills.
THANK & CLOSE

Questionnaire design

A workshop was conducted on questionnaire design by AIMS Research in coordination with experts from APAC and AIDSCAP. Separate questionnaires were developed for each of the population sub-groups.

The questionnaires for each target group were bi-lingual, worded both in Tamil and English.

In the case of male and female students it was decided to use self-filling questionnaires. This was to ensure confidentiality and quality of information.

The questionnaire components differed for each population sub-group, although the BSS indicator related questions were the same.

For each population sub-group, the questionnaire was divided into appropriate sections related to background profile, knowledge on STD / HIV/AIDS, incidence of STD symptoms, sexual behavior and risk perception. Each questionnaire commenced with a set of rapport building questions before the actual sensitive questions regarding sexual behavior and practices were asked.

All sensitive questions were buried among the other questions to ensure cooperation of the respondent and to improve reliability of the data. The questionnaires for each population sub-group were pre-tested in the sampled towns and the findings of the pretest were incorporated in the questionnaire design.

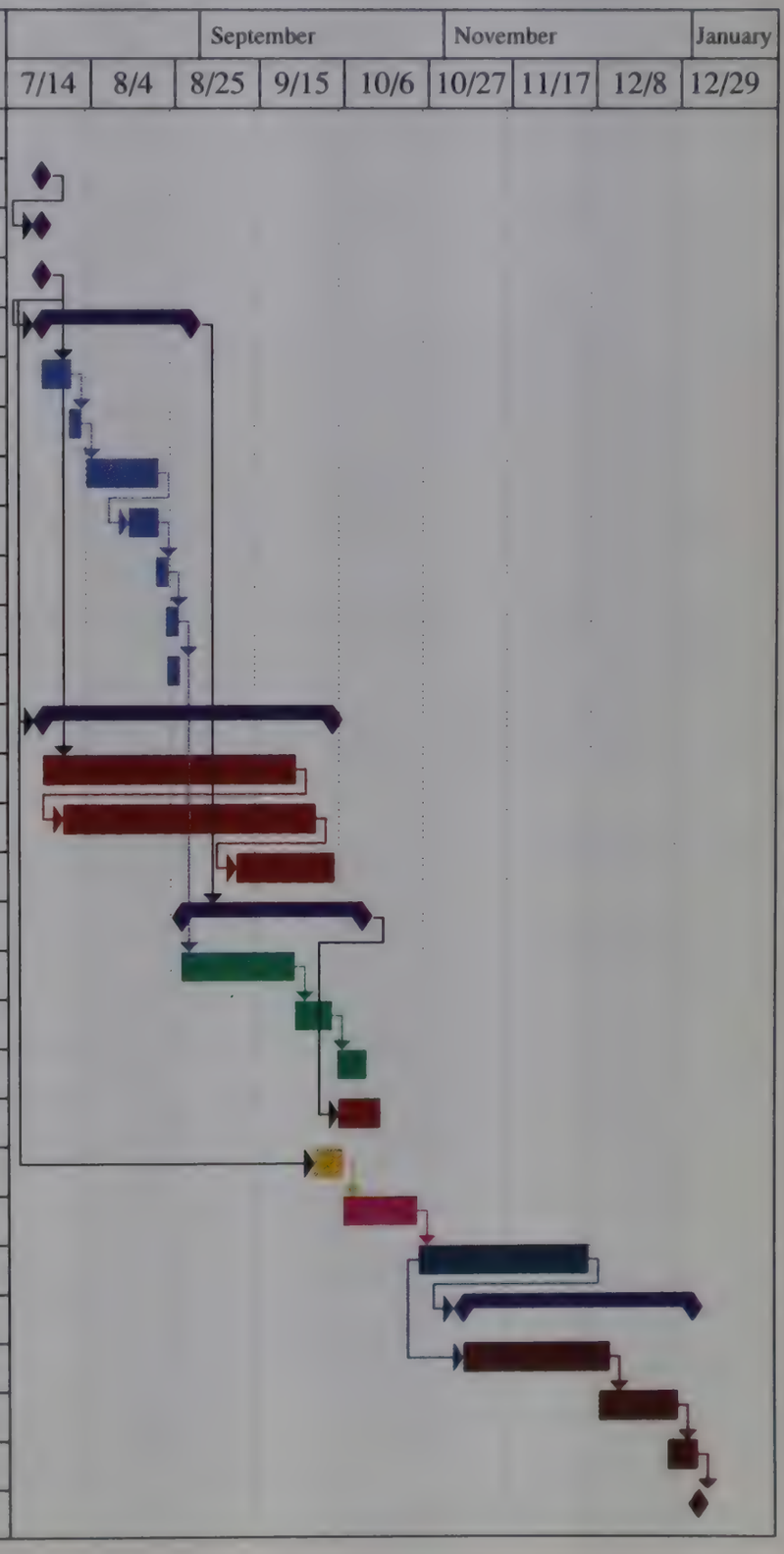
IMPLEMENTATION

IMPLEMENTATION

Due to the sensitive nature of the data to be collected by the BSS, the implementation of the methodology was well planned and closely monitored in order to eliminate all conceivable hurdles in the data collection. The Gantt chart below shows the different stages of implementation and the time taken for each stage for the BSS.

GANTT CHART

ID	Task Name	Duration
1	**Preparatory Work (APAC)**	
2	Sample Groups & Sizes	
3	Sampling Stage I - Towns	
4	**CRA Selection & Contract**	
5	**Exploratory Research**	33d
6	Discussion Guides	8d
7	Workshop	3d
8	Exploratory Interviews	16d
9	Transcription	6d
10	Content Analysis	4d
11	Exploratory Res. Report	4d
12	Workshop	3d
13	**Sampling Frame**	69d
14	Secondary Sources	61d
15	Field Estimates (Universe)	60d
16	Sampling Frames	23d
17	**Questionnaire Design**	44d
18	Draft Questionnaires	28d
19	Pretesting	7d
20	Redesign & Approval	6d
21	**Field Training**	10d
22	**Sampling Stage II - Sites**	6d
23	**Site Fixation**	16d
24	**Questionnaire Survey**	41d
25	**Report**	54d
26	Coding, Entry, Validation	34d
27	Analysis	18d
28	Draft Report Preparation	6d
29	**REPORT PRESENTATION**	0d



Training of interviewers

The data collection team consisted of 92 trained graduate interviewers and 23 experienced post-graduate field executives. A team of six senior research personnel also closely monitored the field work.

An introductory training session on the study objectives and the questionnaires was held in Chennai for the investigators and the supervisory field executives as a team. This was followed by intensive training sessions (classroom and field training) at three base towns viz. Chennai, Madurai and Coimbatore. The training sessions were interactive in nature and were jointly conducted by the AIMS research team and the APAC experts.

The sessions included focused de-sensitization exercises, mock interviews and role-play, which helped the investigators to overcome their initial shyness and talk openly about sensitive issues like sex and sexuality. They were also given a basic theoretical training on STD / HIV/ AIDS related issues. The training ensured that all the misconceptions that the team members had, were cleared.

The investigators were also trained on the basic approach to respondents, appropriate mannerisms to be followed for each target group, the dress codes and ways to tackle hostile attitudes in the fields. More importantly they were trained not to be judgmental but to be empathetic and ensure an understanding attitude towards the respondents. At the end of the training period, the investigators were evaluated on their performance and divided into groups, each group interviewing a specific population sub-group for the interview.

The training was repetitive and intensive to ensure uniformity in data collection as well as quality.

Data collection

Data collection was completed in six weeks using three field headquarters at Chennai, Madurai and Coimbatore.

None of the factory workers and students interviewed, refused to answer sensitive questions though a refusal option was given to them. Some of the interview sites among factory workers and students were changed for want of permission from the gatekeepers. In such cases, alternative sites were randomly selected to achieve the required number of interviews.

1.4% of the male STD patients refused to respond as they did not wish to discuss their personal life especially with regard to sexual behavior. Among truckers and helpers, the refusal rate was 6.6%. This was expressed as their lack of time for the truckers especially at trucking points located near check posts, petrol pumps, etc. The refusal rate among CSWs was high at 15.5%. This was because CSW activity in the state is practised clandestinely and the fear of exposure beside their preoccupation with soliciting their clients caused the refusals.

Quality control and analysis

The study was supervised by a 3-tier field structure and a single executive supervised a maximum of four interviewers per team. Strict quality checks and reporting procedures were adopted. As back checks were not possible in a study of this nature, most of the checking was done concurrently through accompanied interviews by the supervisors.

The data were scruntinized in the field on a day to day basis by the supervisors who kept track of cancelled interviews and reasons thereof.

Data which fell short of required standards were deleted and substituted by fresh interviews within the same cluster. Incomplete interviews were also dealt in the same manner.

All completed questionnaires from target towns were sent to Chennai for final scrutiny and then coded using a standardized code list.

The coded data were further checked for errors and data entry was done in SPSS-6 with built-in consistency and validity checks. The data analysis was done in SAS for Windows, SPSS and Microsoft Excel.Version 7

Ethical issues

The BSS collected data on a wide range of information ranging from relatively benign information to highly sensitive sexual behavior information. Care was taken to conduct the research within internationally accepted ethical standards recommended on the Helsinki Declaration which has guided the ethics of biomedical research since 1964.

The following measures were taken to ensure adherence to ethical standards:

Full information and informed consent

The respondents were provided full information on the purpose of the study and were not misled. They were told that the study might not benefit the individuals directly but might benefit the community at large. While permission was obtained from gatekeepers like school authorities and factory managers, each respondent was provided the option of walking out of the interview at any stage if s/he chose.

Confidentiality

The respondents were interviewed under conditions of assured anonymity. The names and addresses of the respondents were not recorded anywhere and the names of the institutions (factory, school) were used only for sampling purposes. All necessary information was provided to the study team members and total confidentiality was maintained. The interviews were conducted out of earshot of others including teachers, factory managers, other workers, peers etc.

RESPONDENT PROFILE

RESPONDENT PROFILE

The population sub-groups for the BSS ranged from groups with varying degrees of high risk behavior such as female commercial sex workers and male patients being treated for sexually transmitted diseases to low risk behavior groups such as unmarried female and male students. Two occupation groups, one with known high risk behavior i.e. truck drivers and their helpers and another group hypothesized to be at risk i.e., factory workers (male and female) were included to complete the cross section of the population.

While the study has been designed to measure the indicators by population sub-groups and not by towns, the distribution of the respondents across various background characteristics is important for comparison with the respondents in future waves. As this is a survey involving repeated measures among same or comparable populations, demographic/background composition is not expected to change drastically when repeated waves of the BSS are conducted.

It is important to note that the background profile of the group samples may not necessarily be the same as that of the sub-population group as a whole. This is because the BSS is not a general population sexuality survey but is designed to enable behavior measurement over time among specific groups, which are expected to be sensitive to intervention efforts. For instance, the age limit of the factory workers restricted between 18 and 35 may not be demographically representative of the male or female factory worker population of the State. However the age limits have been fixed to cover the likely age group prone to risk behavior. Also the study is entirely urban in nature and therefore not representative of Tamil Nadu's population, 66% of which is rural. The data on background characteristics of the respondents are given in Table 2.2.

Geographical areas

The 10 study towns can be broadly classified into small towns, large towns/cities and major metro (Chennai).

The large sample towns have populations between half million and one million and Chennai, the major metro has a population over five million. The population of the towns are given in Table 2.1

The respondents are distributed varyingly with Chennai accounting for 40% to 52% of the sample covered per target group. The small towns accounted for 10% to 35% of the sample coverage and the large towns 25% to 41%. Since STD patients were covered in the maximum number of towns the sample distribution is almost even across the three categories of the areas for this target group.

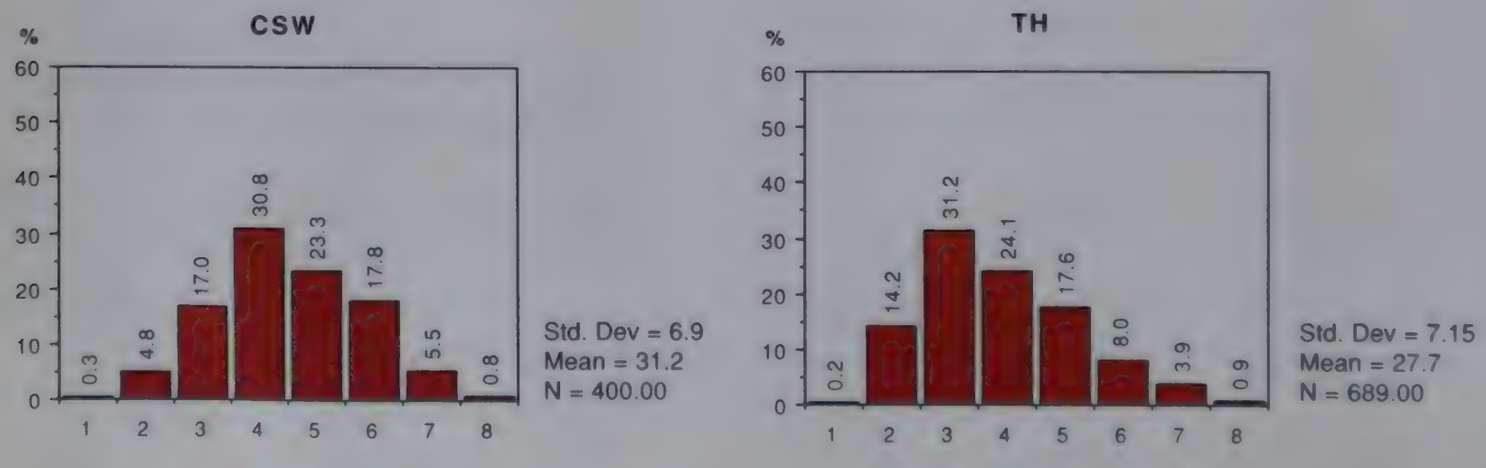
TABLE 2.1 : POPULATION OF SAMPLE TOWNS

Metro/Town	Population (1991 Census)
MAJOR METRO	
Chennai	5,421,985
LARGE TOWNS	
Coimbatore	1,100,746
Madurai	1,085,914
Salem	578,291
SMALL TOWNS	
Vellore	310,776
Erode	302,687
Nagercoil	190,084
Dindigul	182,477
Palani	76,209
Chidambaram	67,949

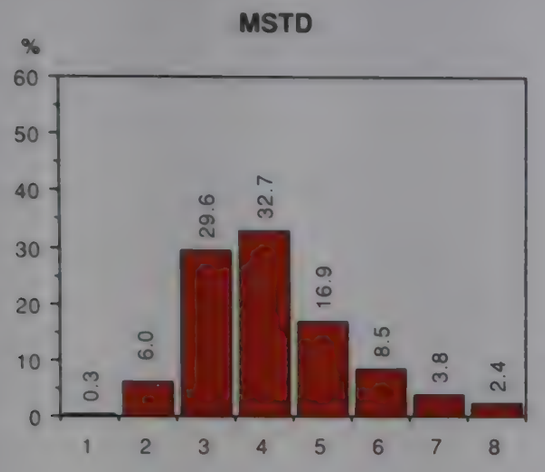
Age group

The female commercial sex workers had the highest mean age of 31.2 years followed by male STD patients 29.2 years and truck drivers and helpers 27.7 years. The male factory workers were evenly distributed and the female factory workers tended to be younger. It is important to note that among factory workers, the age of the respondents was restricted to those between 18 and 35 years of age.

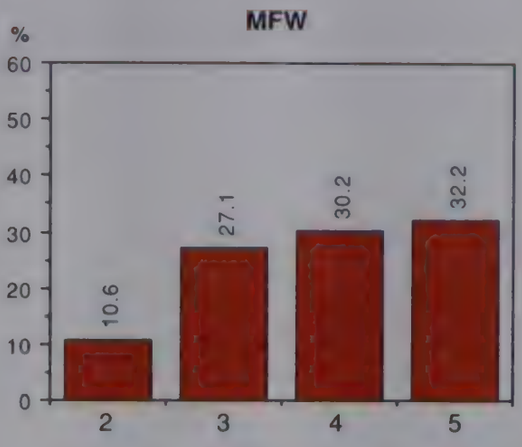
FIG. 2.1: AGE GROUP



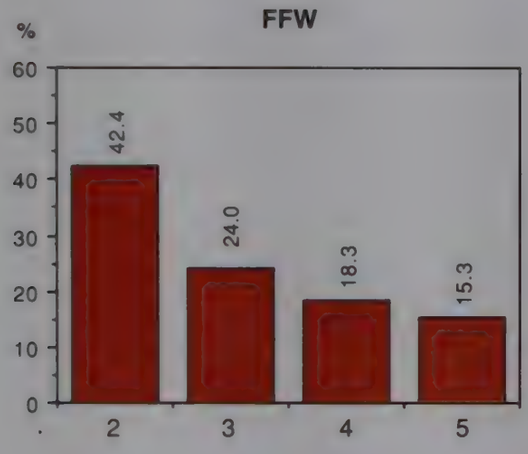
Age group



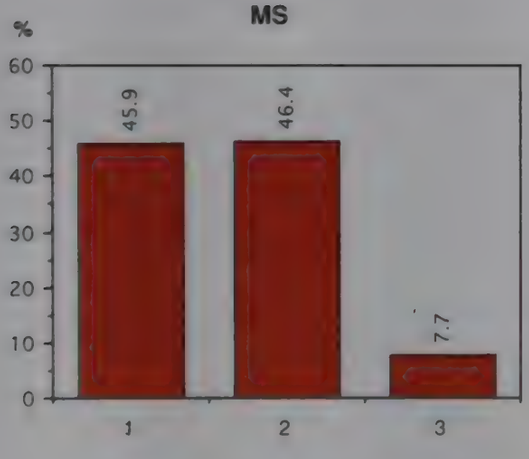
Std. Dev = 7.6
Mean = 29.2
N = 639.00



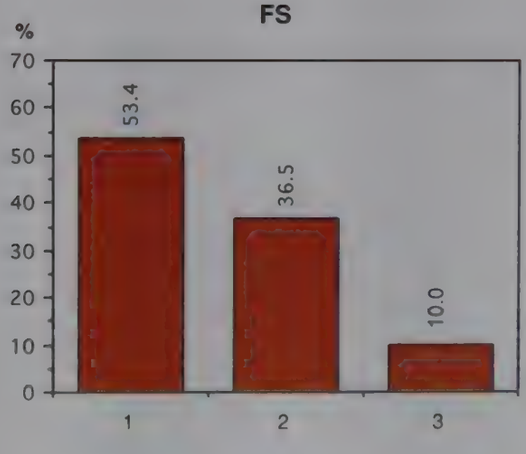
Std. Dev = 5.04
Mean = 27.4
N = 1386.00



Std. Dev = 5.4
Mean = 23.7
N = 1873.00



Std. Dev = 1.97
Mean = 17.7
N = 6196.00



Std. Dev = 1.66
Mean = 17.90
N = 1813.00

1 – Upto 17 years
2 – 18 to 20 years
3 – 21 to 25 years
4 – 26 to 30 years
5 – 31 to 35 years
6 – 36 to 40 years
7 – 41 to 45 years
8 – 51 + years

TABLE 2.2 : BACKGROUND CHARACTERISTICS OF RESPONDENTS

Characteristics	CSW	MSTD	TH	MFW	FFW	MS	FS
Sample size (N)	**400**	**639**	**689**	**1386**	**1873**	**1813**	**6196**
AREA – Percentage population							
Major metro city	45.0	39.9	46.6	46.6	43.4	41.2	52.5
Large towns/cities	40.0	25.0	34.4	43.7	39.8	41.1	37.5
Other towns	15.0	35.4	19.0	9.7	16.8	17.8	10.1
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**
AGE – Percentage population							
Up to 17 years	0.3	0.3	0.2	ni	ni	45.9	53.4
18-20 years	4.8	6.0	14.2	10.6	42.4	46.4	36.5
21-25 years	17.0	29.6	31.2	27.1	24.0	7.7	10.0
26-30 years	30.8	32.7	24.1	30.2	18.3		0.0
31-35 years	23.3	16.9	17.6	32.2	15.3		
36-40 years	17.8	8.5	8.0				
41-50 years	5.5	3.8	3.9				
51+years	0.8	2.4	0.9				
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**
MEAN AGE (Years)	**31.2**	**29.2**	**27.7**	**27.4**	**23.7**	**17.9**	**17.7**
MARITAL STATUS – Percentage population							
Unmarried, single	4.5	46.8	50.4	48.2	54.2	100	100
Unmarried, living with someone	2.0	0.9	1.3	0.2	0.1		
Married, living with wife/husband	33.3	48.2	48.2	51.2	37.4		
Divorced	0.8	0.9	0.0	0.1	0.9		
Married, not living with wife/husband	33.8	2.0	0.0	0.2	3.4		
Widowed	10.0	0.9	0.2	0.1	3.9		
Married, living with somebody else	15.8	0.2	0.0	0.0	0.2		
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Characteristics	CSW	MSTD	TH	MFW	FFW	MS	FS
Sample size (N)	**400**	**639**	**689**	**1386**	**1873**	**1813**	**6196**

HIGHEST EDUCATION LEVEL – Percentage population

Illiterate	38.3	10.5	5.4	1.2	11.2		
Literate but no formal schooling	6.5	4.9	3.6	0.5	2.8		
Up to Class V	23.5	20.5	16.6	6.8	16.0		
Class VI to IX	23.3	32.7	42.2	30.5	37.6		
SSC/HSC/SSLC/PUC/INTER/MTRC	7.8	23.5	30.5	42.1	30.0	44.2	42.8
Diploma	0.0	3.0	0.6	14.1	1.6	6.2	5.4
Graduation	0.8	3.6	1.0	4.3	0.8	47.6	43.0
PG/Professional and above	0.0	1.4	0.2	0.6	0.1	2.1	8.8
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**

OCCUPATION – Percentage population

Skilled factory workers				72.7	62.3		
Unskilled factory workers				27.3	37.7		
Truck drivers/owner-drivers			61.5				
Truck helpers/cleaners	(separate tables)		38.5				
Part-time employees (students)						5.0	2.3
Unemployed/students						95.0	97.7
TOTAL			**100**	**100**	**100**	**100**	**100**

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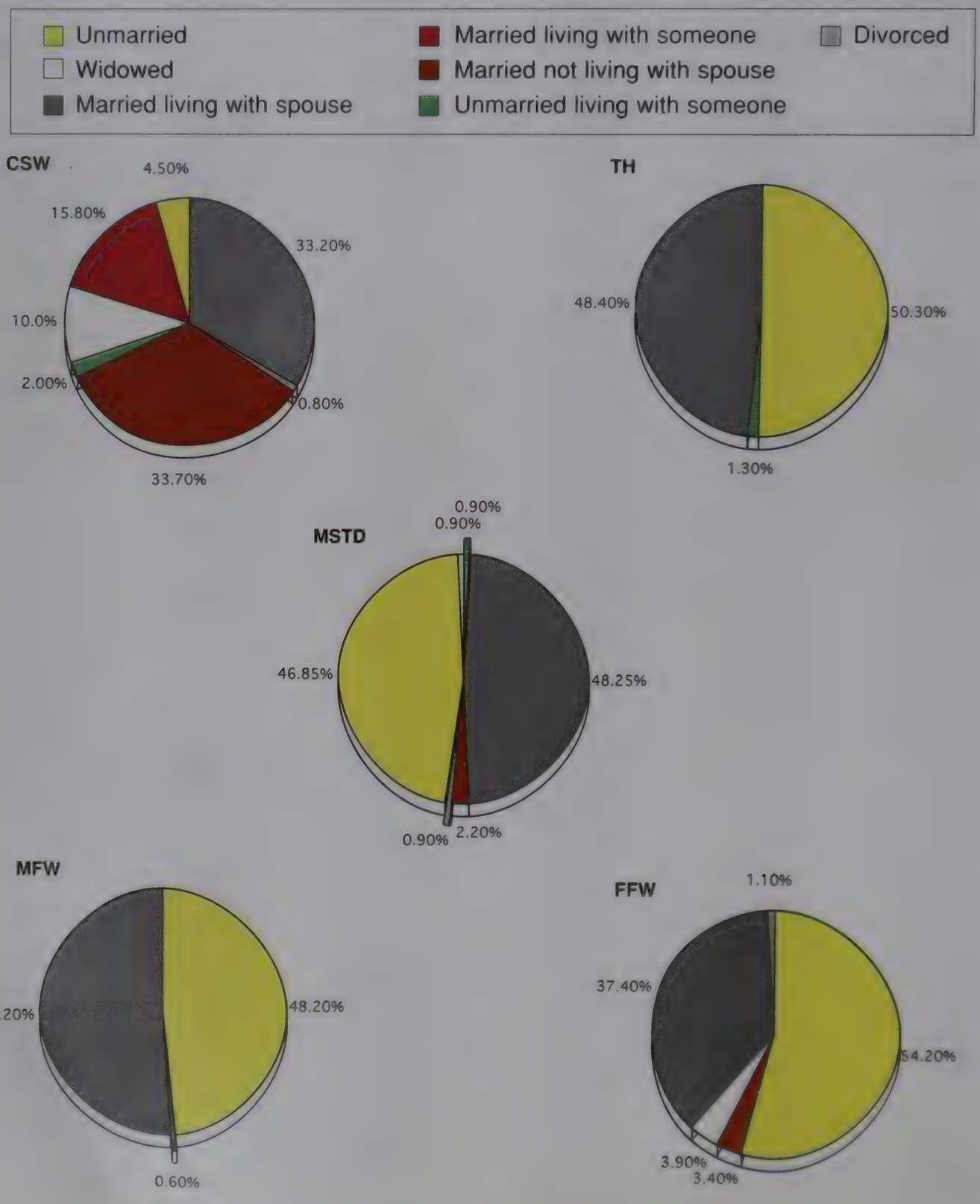
Marital status

The interviews among students were restricted to the unmarried. The following pie diagrams (Fig. 2.2) show the marital status of each population sub-group, and it can be seen that the unmarried persons form a major proportion of the respondents.

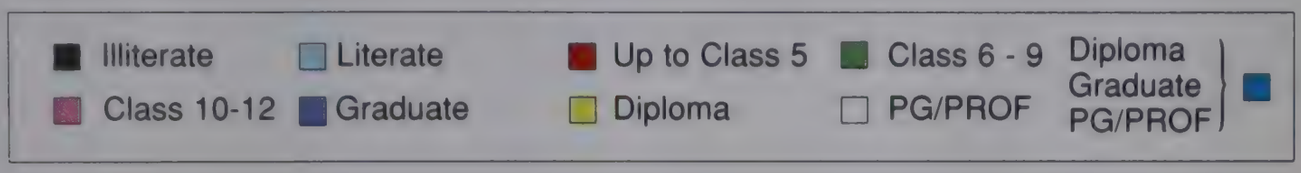
FIG. 2.2: MARITAL STATUS

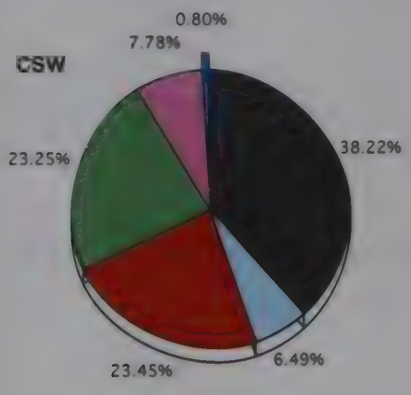


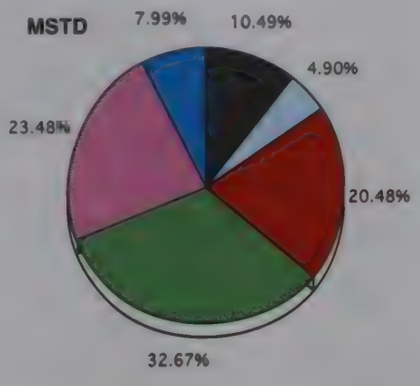
Education

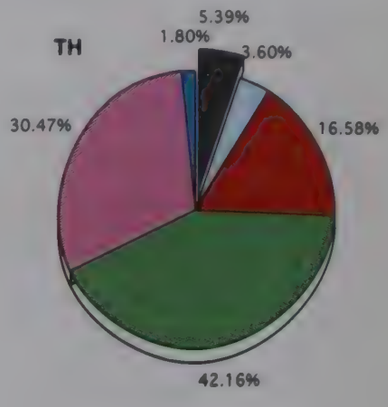
The sample among students has been stratified to ensure coverage of all types of educational institutions. Therefore students at all levels covered are represented. Illiteracy was highest among CSWs, (38.25%) followed by female factory workers (11.41%) and male STD attendees (10.29%). 14.07% of the male factory workers had technical qualifications beyond schooling. A very small proportion of the working target groups had education beyond schooling (>10 years of education).

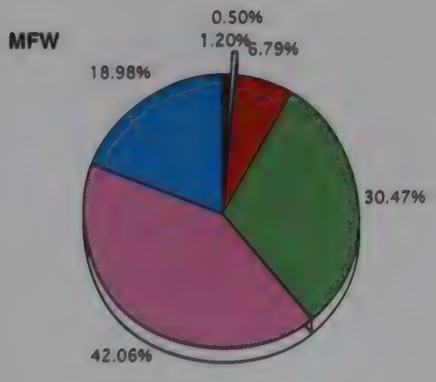
FIG. 2.3: EDUCATION

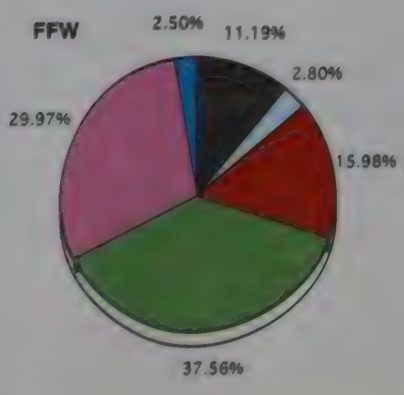


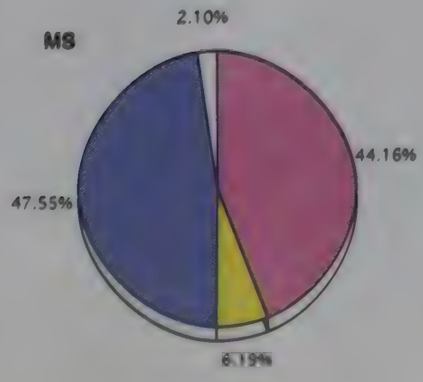


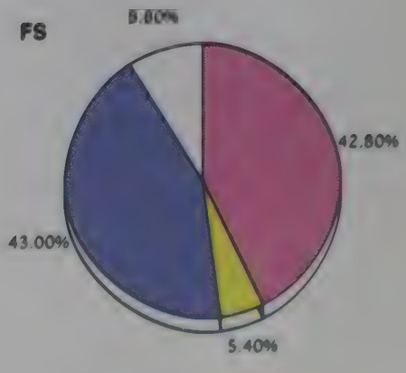












Occupation

62% to 72% of the occupation groups (factory workers, truckers) were employed in skilled jobs. A very small proportion (5% male and 2% female) of the students were employed in part-time occupations. 61.5% of the truckers and helpers were drivers and the rest (38.5%) were helpers.

Table 2.3 shows the occupation of the male STD attendees. Though the persons with STDs hail from all types of occupations, certain occupation groups probably deserve a focus for intervention efforts as they account for around ten percent each of the STD cases being treated. Prominent among these are physical laborers (12.21%), automobile drivers (11.7%) and those employed in construction industry (11.6%).

Agriculture related occupations were reported by 9% of the respondents who are likely from rural areas.

The construction industry also accounts for 5.5% of the female commercial sex workers and this labor intensive industry mostly employing migrant labor from rural areas perhaps needs focused intervention efforts. Table 2.4 shows the occupation distribution of commercial sex workers, 40% of whom were involved in other occupations besides commercial sex. Only 6.75% were in organized employment and 14.25% were involved in hawking or other small trades which suit their commercial sex activity.

TABLE 2.3: OCCUPATION OF MALE STD CLINIC ATTENDEES

Occupation of male STD Attendees (N=639)	%	Occupation of male STD Attendees (N=639)	%
Coolie, contract workers, loaders, etc.,	12.2	Hotel/restaurant industry employees	4.5
Automobiles, taxi, auto drivers	11.7	Textile cottage industry skilled workers	3.4
Construction related skilled workers	11.6	Office boy, watchman, peon, unskilled workers	3.3
Truckers, helpers, owners	10.5	Unemployed/students	3.0
Agriculture, dairy	9.1	Domestic servants, sweepers, cleaners, gardeners	1.9
Vegetable seller, petty traders	9.1	Rickshaw drivers	1.7
Govt. employees, salesmen, manager, clerks	6.4	Social workers	0.3
Factory workers – skilled	6.4		
Businessmen	4.8		

TABLE 2.4 : OTHER OCCUPATION OF CSWS

Other Occupation of CSWs (N=400)	%
No other occupation	60.25
Vegetable/fruits/flower sellers	8.00
Housemaid	7.25
Petty trade/business	6.25
Construction workers	5.50
Agriculture labor/coolie	4.75
Factory/office/shop workers	4.50
NGO/Anganwadi workers	2.25
Film industry	1.25
Total	**100.00**

Profile of the female commercial sex workers

The female commercial sex workers had a mean age of 31.23 years and more than 60% of them were married. The number of respondents married and living with their husbands was almost equal to those married but not living with their husbands. Only 6.5% of the respondents were unmarried. 38.25% of the CSWs were illiterate. Those who had formal schooling but not attained Class ten level were almost evenly distributed between the primary, middle and high school levels. 60.3% of the CSWs interviewed reported that they had no source of income other than commercial sex.

Trade and sex practices

While 30.8% of the CSWs were below 21 and 25 years of age when they had paid-sex for the first time, it is important to note that 22.8% of the CSWs were below 20 years of age when they first had paid sex. An analysis of age at first paid sex across education indicates that among CSWs who were illiterate, the ones without any other occupation were younger than those who had other occupations.

Commercial sex workers are part of the floating population in many towns, especially where commercial sex activity is seasonal. Many CSWs go to tourist centers, places of pilgrimage and large cities seeking employment when business is dull in their home towns. The respondents of this study were asked whether they practised commercial sex in more than one city/town. About 26% of the CSWs work in more than one town and the remaining stay in the same town. 53% of the CSWs who operated only in one town belong to Chennai, whereas 41.2% of the CSWs who work in several towns belong to Palani.

This can be attributed to the fact that Palani being a pilgrimage center, the CSWs may not find enough clients during off season.

The average number of working days for a CSW in a month is 14.4 days. Similarly, the number of clients entertained per working day/night ranged from 1 to 15 and the mean number of clients was 2.5. The cost of commercial sex varies from as low as Rs. 10/- per intercourse to Rs. 2000/- per night.

The CSWs interviewed for this study engage in different patterns of soliciting as all of them move around in different places. Even brothel based CSWs reportedly used public places for direct soliciting. However, 52% of the CSWs reported that soliciting is done at bus stands, 36.3% from the streets and 33.4% from other public places like railway stations, parks, beaches, temples and cinema theaters. Indirect soliciting was through pimps, (16.3%) brothel keepers, (3%) others like auto-drivers, clients, friends and relatives, and phone calls, (18.4%). Soliciting at places of work such as brothel, residence and lodges was reported by 9%.

The place where CSWs engaged in sex also varied from lodges, hotels, brothel and residences to open places, vehicles and places of employment. Hotels and lodges were common places for sex in all towns followed by brothel/work places in Chennai, Madurai and Palani, and open places in Salem. 37.2% of the CSWs soliciting in railway stations had sex in open places.

To the question on number of clients who had used condoms during the past week, in Chennai alone 52.2% of the CSWs reported condom use by all their clients, while a majority of the CSWs in other towns reported condom use only by some of their clients.

During exploratory research it was found that CSWs used condoms only with unknown clients or partners. Most of the CSWs did not feel it necessary to use condoms with their regular partners. 60.5% had sex with regular partners in the last 12 months and among them 97% had sex in the last 10 days. Only 6.5% of the CSWs who had sex with regular partners in the last 10 days used condoms.

To study the incidence of STDs among the sample interviewed, the respondents were asked if they had experienced any symptoms of STDs like sores and ulcers in the genitalia, pain in the vagina during intercourse, vaginal discharge, swelling in the groins and lower abdominal pain. Their treatment seeking behavior too was studied.

45.3% of the respondents reported that they had experienced symptoms of STDs during the last 12 months. 36% of them reported symptoms within the last one month. 60% of CSWs having symptoms reported having sexual intercourse with clients while they had the infections. 77% of CSWs who reported symptoms of STD sought treatment, of whom 30% sought treatment at government hospitals. 11% at private hospitals and 23% from unqualified practitioners.

BASELINE INDICATORS

BASELINE INDICATORS

The baseline wave measures in indicators can be broadly classified into the following topics :

- Knowledge on sexually transmitted diseases and HIV/AIDS (indicators 1, 2, 3, 4)
- Sexual behavior (indicators 5 and 6)
- Urethritis prevalence and health seeking behavior indicators (indicators 7 and 8)
- Appropriate perception of risk (indicator 9)

Table 3.1 provides the measured values on the indicators. The next section discusses further insights from the BSS on the four major topics listed above. In order to compare the profile of those reporting positive for an indicator to the profile of all the respondents in the sample, the ratio (as percentage) of those reporting positive in a category (like age group, education etc.) to all respondents in that category has been worked out for each category and indicator.

TABLE 3.1: BASELINE MEASURES ON BSS INDICATORS

Indicators	Target Groups						
	CSW	MSTD	TH	MFW	FFW	MS	FS
SAMPLE SIZE(N)	**400**	**639**	**689**	**1386**	**1873**	**1813**	**6196**
1. At least two acceptable ways of preventing STD(%)	85	92	92	89	51	83	66
Sampling error at 95% confidence interval ±	**3.5**	**2.1**	**2.0**	**1.6**	**2.3**	**1.7**	**1.2**
2. Condoms prevent STD(%)	87	82	84	82	33	85	59
Sampling error at 95 confidence interval ±	**3.3**	**3.0**	**2.8**	**2.0**	**2.1**	**1.6**	**1.2**
3. Aware of 2 acceptable ways of preventing HIV/AIDS(%)	86	92	95	93	81	88	76
Sampling error at 95% confidence interval ±	**3.4**	**2.2**	**1.6**	**1.3**	**1.8**	**1.5**	**1.1**
4. Condoms prevent AIDS(%)	89	79	77	81	56	86	60
Sampling error at 95% confidence interval ±	**3.1**	**3.2**	**3.1**	**2.1**	**2.2**	**1.6**	**1.2**
5. Sexual intercourse with non-regular partner-last year(%)	100	82	48	15	3	3	1
Sampling error at 95% confidence interval ±	**0**	**2.9**	**3.7**	**1.9**	**0.7**	**0.8**	**0.2**
6. Condom used during last non-regular sexual intercourse (as percentage of indicator E)(%)	56	12	44	17	20	41	38
Sampling error at 95% confidence interval ±	**4.9**	**2.8**	**6.4**	**5.5**	**12.1**	**17.5**	**15.6**
7. Symptoms of urethritis in the last 12 months(%)		65*	9	2		3	
Sampling error at 95% confidence interval ±		**3.7**	**2.1**	**0.8**		**0.7**	
8. Last treatment from qualified allopathic doctor / clinic (as percentage of indicator G)(%)			64	58		18	
Sampling error at 95% confidence interval ±			**22.5**	**30.7**		**17.0**	
9. Risk perceived by those reporting no condom use during last non-regular intercourse (high/slight chance) (as % of respondents who did not use condoms during last non-regular sexual intercourse)(%)	42	26	36	27	61	33	59
Sampling error at 95% confidence interval ±	**8.6**	**4.2**	**8.2**	**7.5**	**23.7**	**20.6**	**24.8**

Knowledge indicators (1, 2, 3 and 4)

To test the knowledge levels on acceptable prevention methods, each respondent was provided a set of options/ways and questioned whether or not each option/way can prevent STD and AIDS separately. The set of options provided had three acceptable ways of preventing STD (four ways for AIDS) and the others were misconceptions. If a respondent correctly identified a minimum of two acceptable ways s/he was considered as having knowledge on prevention of the disease (indicator 1,3). Wrong knowledge and misconceptions are analyzed separately and not considered for the measurement on this indicator. Use of condoms was among the prevention options tested and knowledge on this was the measure for indicator 2 and 4.

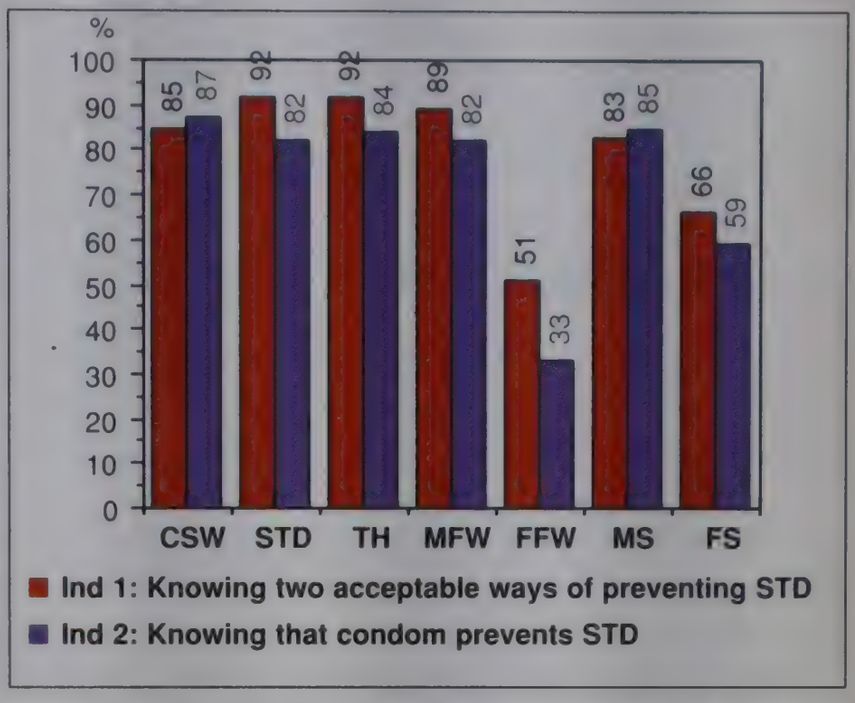
Testing method

The respondents were asked whether they thought that sexually transmitted diseases (STD) could be prevented by each of the several options suggested to them. The prevention options provided include acceptable prevention methods like condom use and single sex partner, besides sexual abstinence. All three options were considered as acceptable. A similar question was asked about the ways of preventing AIDS. Besides the unacceptable options in the case of STD "using disposable syringes/needles" would be an acceptable option in the case of AIDS. The word AIDS was used to include HIV because it was found during qualitative research that except in the case of some students the terms HIV and AIDS meant the same to the respondents. The inset table indicates the acceptable (✔) and unacceptable (×) prevention methods tested.

Prevention Options STD/AIDS	STD	AIDS
Using condoms	✔	✔
Using disposable needles / syringes	×	✔
Avoiding sex	✔	✔
Having sex with one partner	✔	✔
Not wearing clothes of infected persons	×	×
Taking preventive injections / medicines	×	×
Cleaning sex organs with Dettol / disinfectant	×	×
Avoiding public toilets	×	×

Knowledge on STD prevention indicators (1 and 2)

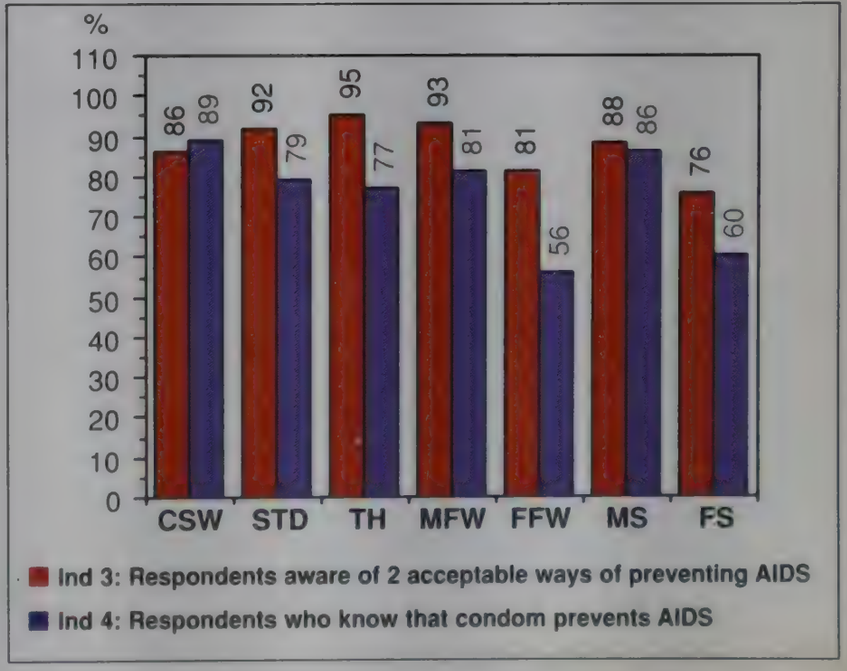
FIG. 3.1: KNOWLEDGE ON STD PREVENTION



With the exception of the female factory workers and female students, a large proportion of all other population sub-groups knew at least two acceptable ways of preventing the sexually transmitted diseases. Among CSWs, 85% of them had the knowledge; while it was similar among male STD clinic patients and truckers and their helpers, at 92%. Male factory workers (89%) also exhibited a high knowledge level but only 51% of the female factory workers knew two acceptable ways. Similarly female students (66%) had a much lower knowledge level than male students (83%). Regarding condom use, it is observed that 87% of the CSWs knew that condoms prevented STD, while among male STD clinic patients (82%), male factory workers (82%), male students (83%) and truckers (84%), it was marginally lesser. Females, (factory workers 33% and female students 59%) had poorer knowledge levels than males.

Knowledge on AIDS prevention indicator (3 and 4)

FIG. 3.2: KNOWLEDGE ON AIDS PREVENTION



Higher knowledge levels were observed on two acceptable ways of preventing AIDS (than STD) among truckers (95%), male factory workers (93%), male STD clinic patients (92%), male students (88%) than CSWs (86%). Female factory workers showed a much better knowledge level about AIDS prevention than STD prevention (81%) and female students had relatively lesser knowledge level (76%).

Female students are still less informed than males despite a uniform AIDS prevention campaign that has been launched in the state among students. The intensive sensitisation efforts in the state through mass and other media is likely to be the cause of high awareness levels among other target groups.

High knowledge levels were also found regarding use of condoms to prevent AIDS among CSWs (89%), male students (86%), male factory workers (81%), male STD clinic patients (79%) and truckers (77%). Lesser proportion of female factory workers (56%) and female students (60%) had knowledge about condoms as prevention method for AIDS.

Sexual behavior indicators (5 and 6)

The respondents were asked a series of questions on their sexual behavior during the past 12 months. The key indicators of risk behavior were measured by the percentage of respondents having sex with non-regular partners during the reference period and the percentage of respondents who used condoms during their last sexual intercourse with non-regular partners. Non-regular sex partners are defined as those sex partners other than spouses with whom the respondent has not had sex regularly over the past year. Some extra marital and pre-marital sexual relationships which were regular were excluded from this indicator. This is because the risk of contracting HIV is much higher during sex with a non-regular sex partner as compared to regular sex partners, though such sexual intercourse could also be risky.

Sexual intercourse with a non-regular sex partner in the last 12 months was reported by 82% of the male STD patients (Fig. 3.3). 48% of truck drivers and helpers and 15% of male factory workers reported non-regular sex while 3% each among female factory workers and male students reported positive to indictor 5. Among female students the extent of non-regular sex was least (1%).

Among those with a non-regular sex partner, condom use in the last sex encounter was highest among CSWs (56%) and truck drivers and helpers (44%) (Fig. 3.4). Male and female factory workers reported a low of 17% and 20% respectively. It is significant that only 12% of the STD patients reported condom use during last non-regular sex.

FÍG. 3.3: SEXUAL INTERCOURSE WITH NON-REGULAR PARTNER - LAST YEAR

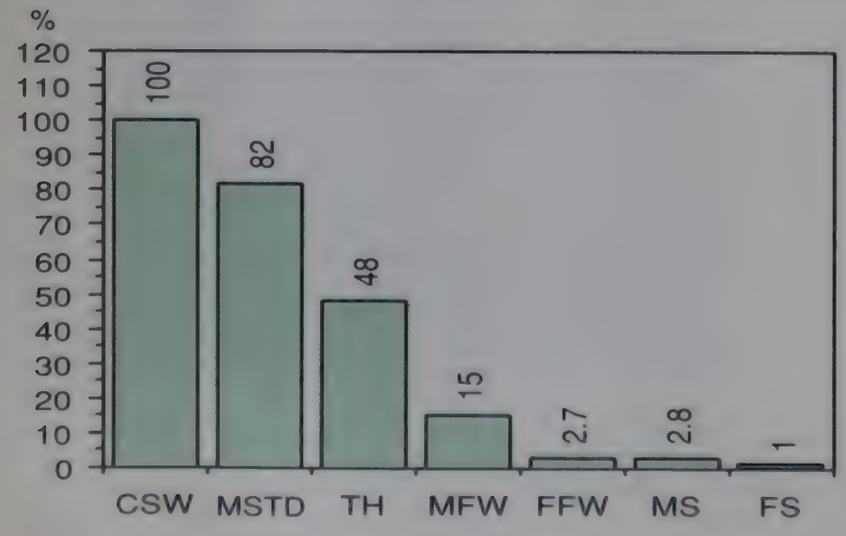
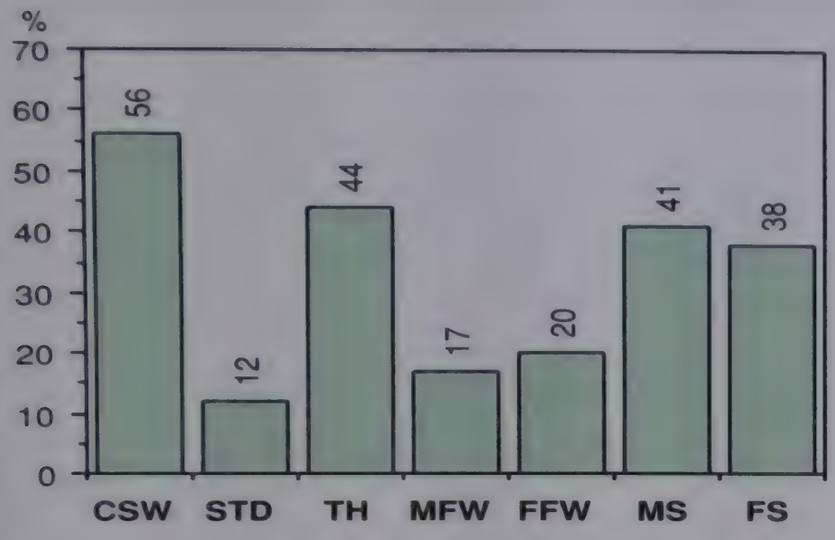


FIG. 3.4 : CONDOM USED DURING LAST NON-REGULAR SEXUAL INTERCOURSE AMONG RESPONDENTS WHO HAD NON-REGULAR PARTNER



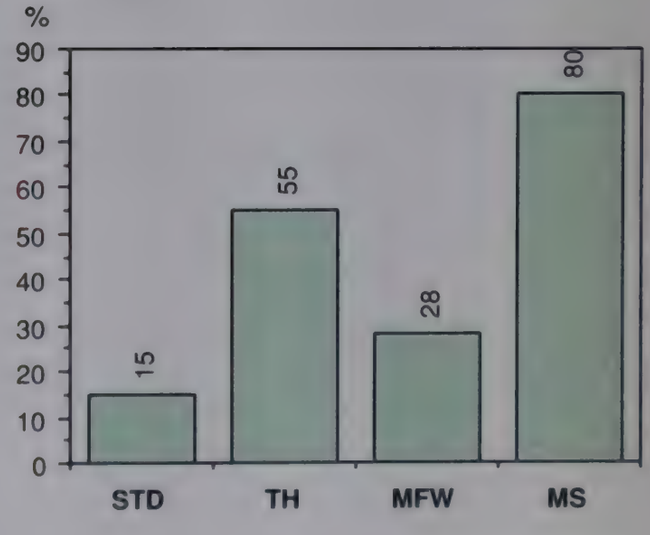
The types of non-regular sex partners and condom use are analyzed in detail in the next section. Since the usage of condoms with commercial sex workers is an important indicator of safer sex behavior, this information is analyzed and presented below. It is found that a large percentage (55%) of truckers use condoms with CSWs (Fig. 3.5). The findings with respect to male students for this indicator are to be carefully interpreted since the number of students reporting paid-sex is very low.

CONDOM USED DURING PAID SEX FOR MALE RESPONDENTS

TABLE 3.2:

TARGET GROUPS	STD	T&H	MFW	MS
TOTAL INTER-VIEWED(N)	639	689	1386	1813
Paid for sex in the last 12 months (MALES) (% of N)	68	38	7	1
Condoms used during last such paid sexual intercourse (% of respondents who paid for sex)	15	55	28	80

FIG. 3.5:



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Urethritis and treatment indicators (7 and 8)

The male respondents were asked whether they experienced any symptoms of urethritis such as pain or discharge of pus in the penis during the past 12 months. While 2% of the male factory workers reported such symptoms and of them 58% had taken treatment from qualified allopathic practitioners, 9% of the truck drivers and helpers had such symptoms, 64% of them had taken treatment from qualified practitioners or from qualified sources (Fig. 3.6 & 3.7). A relatively larger percentage of male students seem to rely on unqualified practitioners for treatment of such symptoms than other target groups. The percentage of respondents taking treatment was also lowest among male students (18%).

It should be emphasized that since the number of persons reporting positive to such indicators are small making the error margins high, inferences are to be carefully made.

FIG. 3.6: REPORTED SYMPTOMS OF URETHRITIS - LAST YEAR

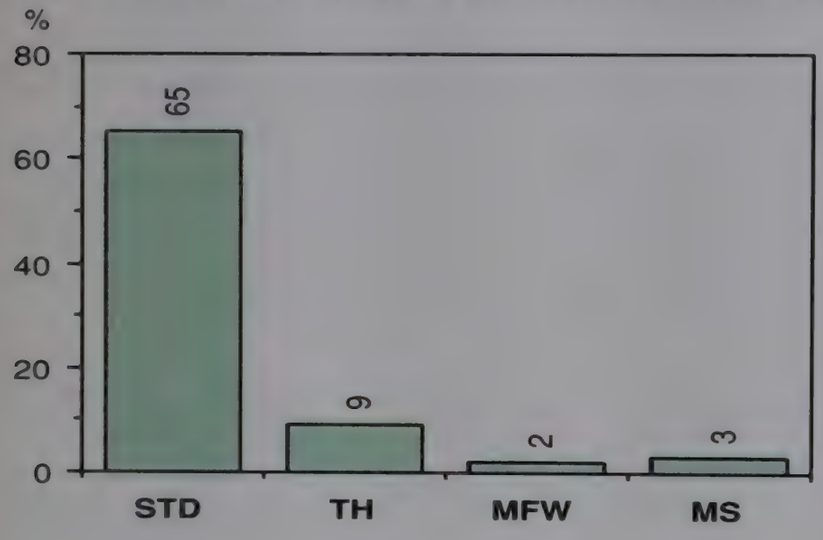
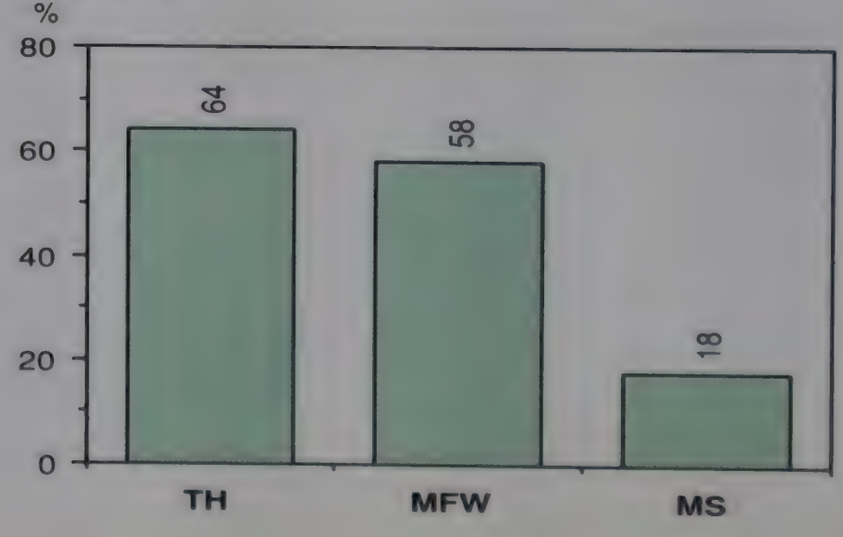


FIG. 3.7: TREATMENT SOUGHT FOR LAST INCIDENCE OF URETHRITIS SYMPTOMS FROM QUALIFIED ALLOPATHIC PRACTITIONER/CLINIC

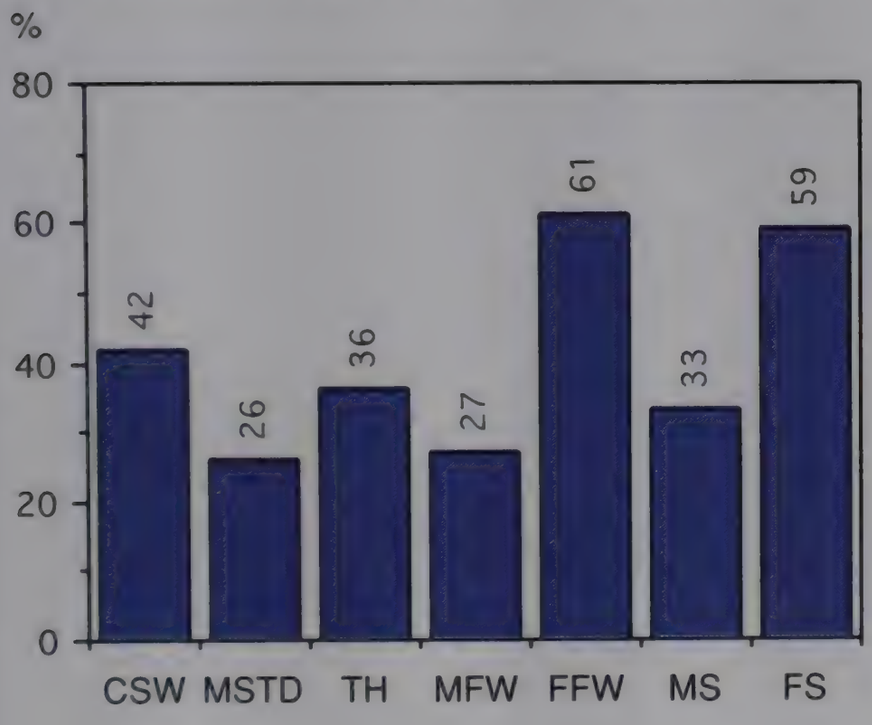


Appropriate perception of risk indicator (9)

The respondents were asked about their perceived chances of contracting AIDS and provided the options of high, slight and no chances of contracting AIDS. The respondents were also asked their reasons for perceiving so. Risk perceptions and the reasons varied considerably and the respondents were allowed to interpret the extent of "high" as against "slight" chances. Appropriate perception was measured by the proportion of those respondents who perceived high or slight chances among those who had not used condoms during their last regular sexual intercourse. This indicator would reflect the extent to which those with risk behavior in the sub-population perceived that they are at risk of contracting AIDS.

The female CSWs (42%), female factory workers (61%) and female students (59%) had larger proportion of those perceiving risk than truckers (36%), male students (33%) male factory workers (27%). Male STD patients had the least risk perception (26%) (Fig. 3.8).

FIG. 3.8: APPROPRIATE PERCEPTION OF RISK



OTHER FINDINGS

OTHER FINDINGS

Knowledge on STD/HIV/AIDS

- Though knowledge on prevention methods of STD / HIV/AIDS is very high, misconceptions are yet to be cleared among most respondents.
- Awareness of the name of the disease and knowledge on acceptable preventive methods including condoms were very high among all male target groups and CSWs (though with misconceptions)
- Among female factory workers and female students knowledge of preventive methods including condoms are considerably lower.
- Students have better knowledge levels than the other target groups.
- Electronic media, print media followed by peers are largely responsible for high awareness levels on AIDS.
- While the target groups have been sensitized about AIDS, a very high dependence on peers as source of information coupled with alarmingly high levels of misconceptions stress the need for urgent intervention including peer education and inter personal communication.

TABLE 4.1 FINDINGS ON KNOWLEDGE ABOUT STD (Percent)

Target Groups	CSW	MSTD	T&H	MFW	FFW	MS	FS
Total interviews(N)	400	639	689	1386	1873	1813	6196
At least two acceptable ways of preventing STDs(%)	85	92	92	89	51	83	66
Condoms prevent STDs(%)	87	82	84	82	33	85	59
Single partner / abstinence prevents STDs(%) 87	96	96	94	60	89	83	
Misconceptions: Avoiding toilets, clothes or disinfecting prevents(%)	84	89	89	84	52	63	58
Belief in preventive medicines/injections(%)	78	84	76	62	43	22	28
Belief that STDs cannot be prevented(%)	4	0	0	0	1	0	1
Knowledge of two acceptable ways but have misconceptions(%)	84	91	92	88	49	77	61
At least two acceptable ways without misconceptions(%)	1	1	1	1	1	6	5

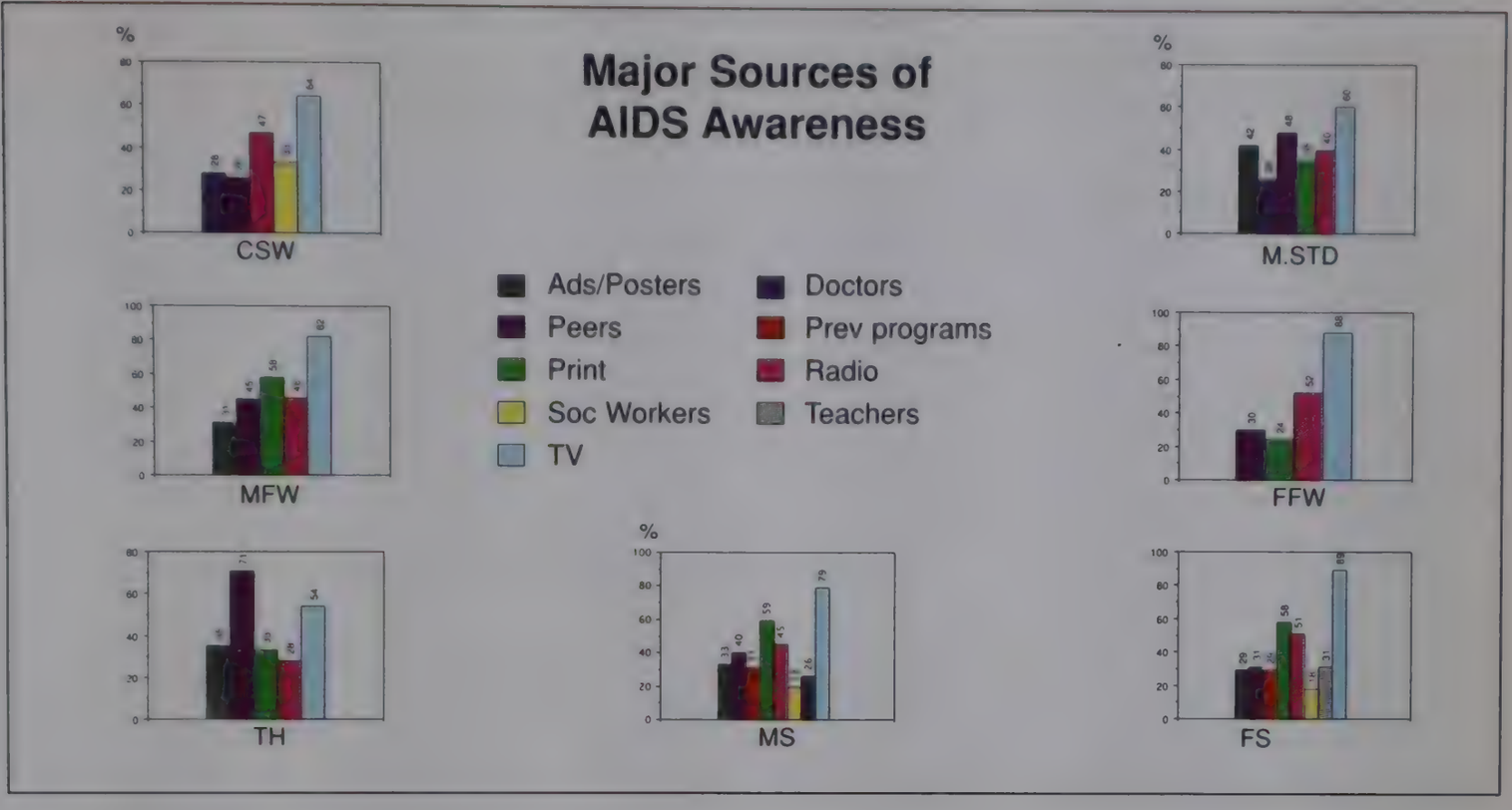
TABLE 4.2 : FINDINGS ON KNOWLEDGE ABOUT AIDS

(Percent)

Target Groups	CSW	MSTD	T&H	MFW	FFW	MS	FS
Total interviews(N)(%)	400	639	689	1386	1873	1813	6196
Aware of 2 acceptable ways of preventing AIDS(%)	86	92	95	93	81	88	76
Condoms prevent AIDS(%)	89	79	77	81	56	86	60
Single partner/abstinence prevents AIDS(%) 87	94	96	96	86	90	82	
Disposable needles/syringes prevent AIDS(%) 67	82	89	87	78	81	75	
Misconceptions: Avoiding toilets/ clothes or disinfecting prevents(%)	75	84	87	76	62	53	49
Belief in preventive medicines/injections(%)	60	38	40	31	35	21	26
Belief that AIDS cannot be prevented(%)	1	0	1	1	4	1	3
Knowledge of two acceptable ways but have misconceptions(%)	76	84	87	76	62	51	43
Atleast two acceptable ways without misconceptions(%)	11	8	8	17	19	37	32

TABLE 4.3 : RESPONDENTS WHO HAVE HEARD ABOUT AIDS AND AWARENESS SOURCES

	CSW	MSTD	TH	MFW	FFW	MS	FS
N	400	639	689	1386	1873	1813	6196
HEARD ABOUT AIDS (%OF N)	96.5	98.6	98.9	99.8	94.9	99.7	99.6
SOURCES OF AIDS AWARENESS (%OF N)							
TV	64	60	54	82	88	79	89
Radio	47	40	28	46	52	45	51
Films	10	17	19	22	13	0	0
Cinema slides	6	14	8	9	12	0	0
Advertisements/Posters	4	42	35	31	17	33	29
Print	8	35	33	58	24	59	58
Peers	26	48	71	45	30	40	31
Teachers	1	2	1	2	3	26	31
Social workers	33	4	6	8	3	19	18
Doctors	28	26	16	13	11	0	0
Sex partners	1	0	0	0	0	0	0
Prevention programs	7	4	7	7	6	31	29



The indicators on knowledge of STD and AIDS showed high to very high levels among most target groups. However, it must be taken into consideration that a high percentage of respondents among CSWs, male STD clinic attendees, truckers and factory workers had many misconceptions related to casual transmission of sexually transmitted diseases and AIDS. Belief in preventive medicines and injections also appears strong. Among students, a relatively lower percentage reported misconceptions on STD and AIDS. Almost all the misconceptions on preventive methods tested showed a high percentage of respondents with the misconceptions. Tables 4.1 and 4.2 present the knowledge level on preventive methods for STD and AIDS which indicate the alarming extent of misconceptions among all target groups. Even students who had gone through an intensive campaign had about a third who were free of misconceptions and were aware of at least two acceptable prevention methods of AIDS (male 37% and female 32%). Those who were free of misconceptions and were aware of two acceptable prevention methods of AIDS were much lower among the population sub-groups (male factory workers 17%, female factory workers 19%, male STD attendees and truckers both 8%, and CSWs 11%). The misconceptions on prevention of other sexually transmitted diseases were high because of the belief that using disposable syringes can prevent transmission of other STDs as it is said to prevent HIV transmission.

The question on prevention methods of AIDS was preceded by questions including "Have you heard about AIDS"? and a question on sources of awareness about AIDS. Most of the respondents have been sensitized by the electronic media and the print media about the name of the disease AIDS (Table: 4.3). Peers such as friends and colleagues form a major source of awareness. Teachers and prevention programers were clearly the source of awareness among students and social workers; for 28% of the CSWs, doctors were also a source of information on AIDS.

Sexual behavior

MAJOR FINDINGS

- Sex with a non-regular sex partner was reported low among students and female factory workers.
- Condom use during the last sexual intercourse with a non-regular partner was highest among CSWs.
- Most common non-regular partners for male STD clinic attendees, truckers and helpers were CSWs but condom usage was high only among the students.
- Condom usage by male STD clinic attendees was higher during sex with known persons. Similar behavior observed with male students
- Even though neighbours or known persons were non-regular partners for most of the male factory workers, condom use was higher during sex with CSWs.
- Petting and kissing among students was more common in the metro than in other towns.
- More than half the CSWs interviewed had regular sex partners but very few of them reported using condoms with such partners.

TABLE 4.4 : FINDINGS ON SEXUAL BEHAVIOR

Indicator	Target Groups	CSW	MSTD	T&H	MFW	FFW	MS	FS
N	Total interviews	400	639	689	1386	1873	1813	6196
a)	Sexual intercourse with non-regular partner in the last 12 months	400	526	329	211	51	51	60
5	Percentage of total interviewed (%)	100	82	48	15	2.7	2.8	1.0
F	Condom used at last non-regular sexual intercourse (% of numbers in row a)	56	12	44	17	20	41	38
S1	Pre/extra marital sex during last 12 months (%)		84	53	18	5	4	2
S2	Ever had pre-marital sex (% of unmarried respondents)		100	73	31	5	6	3
S3	Kissed/petted members of other sex (%)				20	5	11	7
S4	Paid for sex in the last 12 months (Males)(%)		68	38	7		1	
S5	Condom used during last such paid sexual intercourse (% of S4)		15	55	28		80	

The indicators on sexual behavior reveal that non-regular sexual intercourse was expectedly higher among male STD clinic attendees and truckers and helpers. By contrast the number of female students and female factory workers reporting sex with a non-regular partner during the past twelve months was very low.

Table 4.5 reveals that the most common non-regular partners for male STD clinic attendees and truckers were CSWs; for male factory workers and male students, neighbours or known persons. Female factory workers however reported employers and colleagues to be their non-regular partners and female students, their relatives.

TABLE 4.5: TYPE OF NON-REGULAR SEX PARTNER AND CONDOM USAGE DURING LAST SEXUAL INTERCOURSE

	Girl friend/ boy friend	Neighbour/ known person	Relative	CSW	Colleague/ employer	Classmate	Others
Male STD Clinic Attendees (n = 639)							
Had NR Sex * (N)	12	93	31	381			10
Condom (N)	6	7	1	48			
Usage (% of N)	50	8	3	13			
Truckers and Helpers (n = 689)							
Had NR Sex * (N)	12	66	34	216			1
Condom (N)	3	14	4	123			
Usage (% of N)	25	21	12	57			
MFW (n = 1386)							
Had NR Sex * (N)	17	103	9	52			
Condom (N)	1	16	3	16			
Usage (% of N)	6	16	8	31			
FFW (n = 1873)							
Had NR Sex * (N)	9	14	13		15		
Condom (N)	2	1	3		4		
Usage (% of N)	22	7	23		27		
MS (n = 1813)							
Had NR Sex * (N)	15	23	7	4			2
Condom (N)	9	6	5	1			
Usage (% of N)	60	26	71	25			
FS (n = 6196)							
Had NR Sex * (N)	21	6	31				2
Condom (N)	8	4	9			2	
Usage (% of N)	38	67	29			100	

* NR sex-non regular sex

Sexual behavior

MAJOR FINDINGS

- Sex with a non-regular sex partner was reported low among students and female factory workers.
- Condom use during the last sexual intercourse with a non-regular partner was highest among CSWs.
- Most common non-regular partners for male STD clinic attendees, truckers and helpers were CSWs but condom usage was high only among the students.
- Condom usage by male STD clinic attendees was higher during sex with known persons. Similar behavior observed with male students
- Even though neighbours or known persons were non-regular partners for most of the male factory workers, condom use was higher during sex with CSWs.
- Petting and kissing among students was more common in the metro than in other towns.
- More than half the CSWs interviewed had regular sex partners but very few of them reported using condoms with such partners.

TABLE 4.4 : FINDINGS ON SEXUAL BEHAVIOR

Indicator	Target Groups	CSW	MSTD	T&H	MFW	FFW	MS	FS
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a)	Sexual intercourse with non-regular partner in the last 12 months	400	526	329	211	51	51	60
5	Percentage of total interviewed (%)	100	82	48	15	2.7	2.8	1.0
F	Condom used at last non-regular sexual intercourse (% of numbers in row a)	56	12	44	17	20	41	38
S1	Pre/extra marital sex during last 12 months (%)		84	53	18	5	4	2
S2	Ever had pre-marital sex (% of unmarried respondents)		100	73	31	5	6	3
S3	Kissed/petted members of other sex (%)				20	5	11	7
S4	Paid for sex in the last 12 months (Males)(%)		68	38	7		1	
S5	Condom used during last such paid sexual intercourse (% of S4)		15	55	28		80	

The indicators on sexual behavior reveal that non-regular sexual intercourse was expectedly higher among male STD clinic attendees and truckers and helpers. By contrast the number of female students and female factory workers reporting sex with a non-regular partner during the past twelve months was very low.

Table 4.5 reveals that the most common non-regular partners for male STD clinic attendees and truckers were CSWs; for male factory workers and male students, neighbours or known persons. Female factory workers however reported employers and colleagues to be their non-regular partners and female students, their relatives.

TABLE 4.5: TYPE OF NON-REGULAR SEX PARTNER AND CONDOM USAGE DURING LAST SEXUAL INTERCOURSE

	Girl friend/ boy friend	Neighbour/ known person	Relative	CSW	Colleague/ employer	Classmate	Others
Male STD Clinic Attendees (n = 639)							
Had NR Sex * (N)	12	93	31	381			10
Condom (N)	6	7	1	48			
Usage (% of N)	50	8	3	13			
Truckers and Helpers (n = 689)							
Had NR Sex * (N)	12	66	34	216			1
Condom (N)	3	14	4	123			
Usage (% of N)	25	21	12	57			
MFW (n = 1386)							
Had NR Sex * (N)	17	103	9	52			
Condom (N)	1	16	3	16			
Usage (% of N)	6	16	8	31			
FFW (n = 1873)							
Had NR Sex * (N)	9	14	13		15		
Condom (N)	2	1	3		4		
Usage (% of N)	22	7	23		27		
MS (n = 1813)							
Had NR Sex * (N)	15	23	7	4			2
Condom (N)	9	6	5	1			
Usage (% of N)	60	26	71	25			
FS (n = 6196)							
Had NR Sex * (N)	21	6	31				2
Condom (N)	8	4	9			2	
Usage (% of N)	38	67	29			100	

* NR sex-non regular sex

STD/URETHRITIS - SYMPTOMS/TREATMENT

MAJOR FINDINGS

- Larger proportion of truckers and helpers and smaller proportion of male factory workers and Male students reported symptoms of urethritis
- Male STD patients with minor symptoms seem to go to unqualified medical practitioners whereas those with persistent or major symptoms tend to seek treatment from qualified medical practitioners.
- More than half the truckers and helpers who suffered from STD and urethritis have sought treatment.
- Government male STD clinics are more popular with low income groups like coolies, contract laborers, etc, Truckers and fleet owners seem to prefer private STD clinics.

TABLE 4.6 : FINDINGS ON URETHRITIS AND STDs

Indicator	Target Groups	CSW	MSTD	T&H	MFW	MS
N	Total Interviewed (N)	400	639	689	1386	1813
7	Symptoms of urethritis in the last 12 months (% of N)		65	9	2.2	2.8
8	Last treatment from qualified practitioner/clinic (% of 7)			64	58	18
U2	Last treatment from unqualified practitioners (urethritis) (% of 7)			23	19	20
U3	Symptoms of STDs including urethritis in last 12 months (% of N)	45	100	12	3	4
U4	Treatment sought for STDs symptoms in last 12 months (% of U3)	77	100	87	78	46
U5	Last treatment from qualified practitioner/ clinic (STD) (% of U3)	60	79	64	61	22
U6	Last treatment from unqualified practitioners (STD) (% of U3)	18	21	23	17	24

The findings on urethritis and STDs reveal that most of the truckers and helpers who reported experiencing symptoms of STDs including urethritis have sought treatment from qualified medical practitioners.

Very small proportion of male factory workers and male students reported symptoms of STDs and urethritis.

A little less than half the CSWs interviewed (46%) reported experiencing symptoms of STDs during the past one year. More than half of these CSWs (60%) had sought treatment from a qualified medical practitioner and 60% of the CSWs with the symptoms of STD had sexual intercourse with clients.

Risk perception

MAJOR FINDINGS

- Less than 50% of the CSWs, male STD clinic attendees, truckers and male factory workers who reported risk behavior have reported appropriate risk perceptions.
- Less than half of all respondents perceived themselves as being at risk of contracting HIV.
- Less than a quarter of female factory workers who reported to have never had sex perceived themselves at risk of contracting HIV.
- Considerable proportions of those who perceived risk appropriate to their behavior had misconceptions as the reasons for such perceptions.

TABLE 4.7 : PERCEIVED RISK OF CONTRACTING AIDS (SLIGHT/VERY HIGH CHANCES)

Target Groups	CSW	MSTD	T&H	MFW	FFW	MS	FS
Total interviewed(N)	400	639	689	1386	1873	1813	6196
% of total respondents perceiving high / slight changes	34	25	20	16	24	11	6
No. of respondents who did not have non-regular sex (12 months)	0	113	360	1175	1822	1762	6136
% of respondents without non-regular sex perceiving high / slight chance	0	17	10	14	23	11	6
No. of respondents who used condom with last non regular sexual intercourse	225	62	144	36	10	21	23
% of condom using respondents perceiving high / slight chances of risk	28	34	26	33	30	19	74
No. of respondents who did not use condom-last non-regular intercourse 175	464	185	175	41	30	37	
% perceiving high / slight risk	42	26	36	27	61	33	59

A considerable proportion of the CSWs interviewed thought they did not stand a risk of contracting HIV since they were taking preventive medicines or treatment for illnesses. 41.3% of the CSWs who had used condoms during their last sexual intercourse cited regular usage of condoms as reason for not perceiving themselves at risk of contracting HIV. 37.1% of the CSWs who did not use condoms during the last sexual intercourse thought they might be infected with HIV through their clients; since they do not use condoms regularly with the clients. Truckers and helpers cited having sex frequently with CSWs or non-usage of condoms as reasons for their risk perceptions. A little more than a quarter of the male STD clinic attendees who did not use condoms during their last non-regular sexual intercourse said they did not stand a chance of being infected with HIV because they took preventive medicines. Considerable number of respondents of all the population sub-groups also cited misconceptions as reasons for either perceiving or not perceiving themselves at risk of HIV infection even though they did not use condoms during their last sexual encounter with a non-regular partner. Thus, most of the condom users of all population sub-groups did not perceive themselves to be at risk of HIV infection. Many of those who did perceive themselves at risk, though had misconceptions attributed the misconceptions as reasons for their lack of fear.

A very small proportion of the female factory workers had non-regular sex in the past year. A majority of them reported non-usage of condoms and thought they stood a risk of getting infected with HIV despite being aware of AIDS and taking precautions. Most of the female factory workers who perceived risk of getting HIV said they thought so since they are aware of AIDS.

Most of the female factory workers who had not had non-regular sex in the past year said they did not stand a risk of HIV infection as they had only single partner sex. 90% of those who perceived themselves to be at risk of HIV infection said they are aware of AIDS and would take preventive measures.

SUMMARY

SUMMARY

A high proportion of all groups except female industrial workers and students correctly identified two ways of preventing STDs and sexually transmitted HIV/AIDS.

Knowledge on condoms preventing STD and HIV/AIDS is high among CSWs, male factory workers and students.

Percent who have sex with a non-regular sex partner is low among both male and female students and female factory workers.

Use of condoms with a non-regular sex partner needs improvement.

Risk perception is low among male STD patients, truckers and male factory workers.

Low level of condom use among STD clinic attendees warrants action for condom promotion measures in STD clinics, both government and private.

For

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